Run

Sequence:

AX014140 AX164131

Sequence Sequence

Homo sapi

Continuation

Sequence Rattus no tion (8 of Homo sapi Rattus no

Homo sapi Bos tauru

```
Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                    Post-processing: Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                         Total number of hits satisfying chosen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                           Word size
                                                                                                                                                                                                                                                                                                                                                                                                                         Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                               Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OM nucleic -
                                               Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
              Score
                                                                                                                                                                                                                                                                                                                                                                   seg length: 0 seg length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         nucleic search,
            Query
Match Length
                                                                                                                                                                                                                                     10:
                                                                                                                                                                                                                                                                                                                                                                                                                                     Gapop 60.0 , Gapext 60.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-092-297-5
763
                                                                                                                                                                                                                                                                                                                                                                                                                       1797656 seqs, 10463268293
                                                                                                                                                                                                                                                                                                                                      GenEmbl: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           November
                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTCCACTGCAACCACCCAGA...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Copyright
                                                                                                                                                                                                                                                                  gb_ph:*
gb_pr:*
                                                                               em_htg_hum:*
em_htg_inv:*
em_htg_other:*
em_htgo_inv:*
                                                                                                                                                                        em_mu:*
em_om:*
em_or:*
                                                                                                                                                                                                                            gb_sy:*
gb_v1:*
                                                                                                                     em_un:*
                                                                                                                              em_sts:*
                                                                                                                                    em_ro:*
                                                                                                                                                                   em_ov: *
                                                                                                                                                                                                                                                    gb_sts:*
                                                                                                                                                                                                                                                           gb_ro:*
                                                                                                                                                                                                em_in:*
                                                                                                                                                                                                       em_hum:
                                                                                                                                                                                                             em_fun:
                                                                                                                                                                                                                     em_ba:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ψ
             DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GenCore version 5.1.3 (c) 1993 - 2002 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2002, 01:03:01; Search time 1828 Seconds (without alignments) 8734.654 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         using sw
             H
                                   SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         model
                                                                                                                                                                                                                                                                                                                                                                                         parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                        residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                           .....ATAAATTTATGTACTTTATA 763
                                                                                                                                                                                                                                                                                                                                                                                         3595312
       Description
                                                                                                        AXOL4 14 O
LOCUS
DEFINITION
ACCESSION
VERSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                        FEATURES
                                                                                    REFERENCE
                                                                                                                                                                                                                                  000
                                                      TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                 000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                           000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 000
                                                                             AUTHORS
                                                                                                                                                                                                                                 source
                                                                nammalia; Eutheria; Prii
1 (bases 1 to 762)
Schmitt, A., Specht, T., D
Pilarsky, C.
                                                                                          Homo sapiens
Eukaryota; Me
Mammalia; Eut
                                                                                                                                       Sequence
AX014140
                   Human nucleic acid seguences of bladder tumour tissue Patent; WO 954447-A (28-OCT-1999;) SCHMITT ARMIN (DE); SAECHT THOMAS (DE); DAHL EDGAR (DE); HINZMANN BERND (DE); ROSENTHAL ANDRÉ"(DE); METAGEN GES FUER GENOMFORSCHUN (DE); PILARSKY CHRISTIAN (DE) LOCATION/Qualifiers
                                                                                                                                AX014140.1
                                                                                                                                                      AX014140
                                                                                                                                                                                                                  /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                         179793
194529
195358
198677
217129
219508
223098
223707
310909
338234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             110000
152815
159759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   107573
146180
                                                                                                 Metazoa;
                                                                                                                                             762 bp
from Patent WO9954447.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        218892
                                                                                                                                GI:10040587
                                                                                                                                                                                                                                                                                                                                                                                                                                                 8629
                                                                                         Chordata;
Primates;
                                                                                                                                                                                                                AC063963
AC079579
AE003715
AC096879
AE003427
DMU31961
I51927
                                                                                                                                                                                                                                                                     AC036146
AC040892
AE001863
                                                                                                                                                                                                                                                                                                                                                                                                                  AC026963
AC103584
AC007225
AC591067
AX1591067
AXACOAC
ATACOAC
AE009597
DROABDB2
AC014052
AB025636
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AX014140
AX164131
AC006262
AC007193
AX164149
                                                                                                                                                                                                                                                                                                                                                               AC096880
                                                                                                                                                                                                                                                                                                                                                                                                    HS63G5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AC097591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LMFLCHR34
                                                                         Dahl, E., Hinzmann, B.,
                                                                                                                                                                                          ALIGNMENTS
                                                                                         Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                    DNA
                                                                                                                                                    linear
```

AE003715 Drosophil AC096879 Pan trogl AE003427 Drosophil U31961 Drosophila I51927 Sequence 14

Mus muscu Homo sapi Deinococc Homo sapi Drosophil

Homo sap Homo sapi

Mus muscu

Homo sapi

PAT 07-SEP-2000

AC014052 Drosophil
AB025636 Arabidops
AC020384 Drosophil
294160 Human DNA s
AC104042 Homo sapi
AF058826 Arabidops
AC095391 Rattus no
AC015890 Mus muscu
AC095880 Pan trogl
AL13373 Human chr
AC095018 Drosophil
AC019203 Homo sapi
AC019203 Homo sapi
AC019203 Homo sapi

AC007225 Homo sapi AL591067 Mus muscu AX164150 Sequence Y09061 A.thaliana AE009597 Brucella L31549 Drosophila

Result No.

Rosenthal, A.

```
RESULT 2
AX164131
LOCUS
                                             VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BASE COUNT
ORIGIN
 REFERENCE
AUTHORS
                                                                                   DEFINITION
                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local S
Matches 760
                                     ORGANISM
                                                                                                                                                                                                                  601
                                                                                                                                          721
                                                                                                                                                           721
                                                                                                                                                                             661
                                                                                                                                                                                                661
                                                                                                                                                                                                                                     601
                                                                                                                                                                                                                                                      541
                                                                                                                                                                                                                                                                         541
                                                                                                                                                                                                                                                                                          481
                                                                                                                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                421
                                                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                        TGGCTGGGGAACCCTTCACCCTTCTGTGAGATTTTCCATCATCTCAAGTTCTCTCTATC
                                                                                                                                                                                                                GGACTCTGAACCCTCCTGATGACCCCTATGGCCAACATCAACCCGGCACCACCCCAAGGC
                                                                                                                                                                                                                         GGACTCTGAACCCTCCTGATGACCCSTATGGCCAACATCAACCCGGCACCACCCCAAGGC
                                                                                                                                                                                                                                                    AGAACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGCTAATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                          ACTGTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCAGACGTGTGGAAACTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAGGAGCAAAGCACAGGATCATAAATAAATTTATGTACTTTA 761
                                                                                                                                                                             TGGCTGGGGAACCCTTCACCCTTCTGTGAGATTTTCCATCATCTCAAGTTCTCTTCTATC
                                                                                                                                                                                                                                                                                                                                                                  AGAACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGCTAATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTCCACTGCAACCACCCAGAGCCATGGCTCCCCGAGGCTGCATCGTAGCTGTCTTTGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTCCACTGCAACCAAGCCAGAGCCATGCCTCCCCGAGGCTGCATCGTAGCTGTCTTTGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               760;
        Homo sapiens
Eukaryota; Metazoa; (
Mammalia; Eutheria; I
1 (bases 1 to 771)
                                                                Sequence
AX164131
AX164131.
                                                                                           AX164131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
Fong, S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              മ
                                                                  'n
                                                                                  w
Goddard, A.,
                                                                                  from
                                                                 GI:14545080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        93.1%;
99.9%;
                                                                                 771 bp
Patent W00140465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a
                  Chordata;
Primates;
Godowski, P.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9 710;
No. 0;
                  Craniata; Vertebrata; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB
                                                                                           DNA
Grimaldi, C.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1;
                                                                                                                                          761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                            linear
Gurney, A.L.
                           Euteleostomi;
                                                                                           PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                           22-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                 660
                                                                                                                                                                                                                                   660
                                                                                                                                                                                                                                                      909
                                                                                                                                                                                                                                                                        900
                                                                                                                                                                                                                                                                                          540
                                                                                                                                                                                                                                                                                                             540
                                                                                                                                                                                                                                                                                                                                               480
                                                                                                                                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                                                                                                                    420
                                                                                                                                                                                                                                                                                                                                                                                                      360
                                                                                                                                                                                                                                                                                                                                                                                                                         360
                                                                                                                                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60
                                                                                                                                                                                              720
                                                                                                                                                                                                                                                                                                                               480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                 RESULT 3
AC006262
                                                                                                                                              δÃ
                                                                                                                                                                                                        В
                                                                                                                                                                                                                         ρ
                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                             Q
                                                                                                                                                                                                                                                                                 뮵
LOCUS
DEFINITION
                                                                      Š
                                                                                           밁
                                                                                                           δδ
                                                                                                                               밁
                                                                                                                                                                    밁
                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                  δõ
                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                         δõ
                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                           661
                                                                                                            661
                                                                                                                               601
                                                                                                                                                601
                                                                                                                                                                    541
                                                                                                                                                                                     541
                                                                                                                                                                                                        481
                                                                                                                                                                                                                          481
                                                                                                                                                                                                                                             421
                                                                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                          241
                                                       721
                                                                       721
                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTCCACTGCAACCACCCAGAGCCATGGCTCCCCGAGGCTGCATCGTAGCTGTCTTTTGCCA
                                                     CAGGAGCAAAGCACAGGATCATAATAAATTTATGTACTTTATA 763
                                                                                                                                                                   TTTTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCATGACTCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTCCACTGCAACCACCCAGAGCCATGGCTCCCCGAGGCTGCATCGTAGCTGTCTTTGCCA
                                                                                                   TGGCTGGGGAACCCTTCACCCTTCTGTGAGATTTTCCATCATCTCAAGTTCTCTTCTATC
                                                                                                                               GGACTCTGAACCCTCCTGATGACCCCTATGGCCAACATCAACCCGGCACCACCCCAAGGC
                                                                                                                                        GGACTCTGAACCCTCCTGATGACCCSTATGGCCAACATCAACCCGGCACCACCCCAAGGC
                                                                                                                                                                                                        AACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCCACCCTGCAGCTGCCCTGAGGAGGC
                                                                                                                                                                                                                  AACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCGCTGCCCTGAGGAGGAGGC
                                                                                                                                                                                                                                             ACTGTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCAGACGTGTGGAAACTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTTTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCATGACTCCTT
                                                                                          TGGCTGGGGAACCCTTCACCCTTCTGTGAGATTTTCCATCATCTCAAGTTCTCTATC
                                                                                                                                                                                                                                                                                                                                                                                            ACTGTTGCTATGATGATGCCGTCGTCCCTTGGCCCAGGACCCCAGACGTGTGGAAACTGCA
AC006262
Homo sapi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hillan, K.J., Compositions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Genentech, Inc. (US)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             169
sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO 0140465-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Homo sapiens"
/db_xref="taxon:9606"
231 c 195 g 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     and
107573 bp
chromosome 19, BAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tumas,D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       86.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ns,D., Watanabe,C.K., Wood,W.I. and Zhang,Z.
methods for the treatment of immune related
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 661; 'DB Pred. No. 0; O; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3 07-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            176
DNA
BC264576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2
linear PRI 21-SEP-
(CTC-297N14), complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 771;
```

480 420 420 360 360

300 300 240 240 180 180 120 120 60 60

Ş

밁

Ş

밁 δÃ 밁 δÃ ₽ Š 밁

밁

Ş

0;

Gaps

0,

Ş

멍 Q

밁

Š 밁 Qy В Ş 밁 δõ 밁 δÃ

밁

PRI 21-SEP-2001

```
JOURNAL
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                             repeat_region
                                                                                      repeat_region
                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Direct Submission

Submitted (21-SEP-2001) Joint Genome Institute, Lawrence Livermore National Laboratory, 7000 East Ave., Livermore, CA 94551, USA
On Sep 21, 2001 this sequence version replaced gi:4079612.

Map and sequence oriented from centromere to g telomere, BC264576 overlaps BC282485 (CTC-344H19, AC007785) to the left from bases 1 to 20,296 of this accession, and overlaps BC82621 (CTB-139A18, AC0077193) to the right from bases 106,317 to 107,573 of this accession. This sequence does not represent the entire insert of BC264576. Additional chromosome 19 map and sequence information may be obtained at: http://www-bio.llnl.gov/bbrp/genome/genome.html.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Lamerdin, J.E., McCready, P.M., Skowronski, E., Viswanathan, V., Burkhart-Schultz, K., Gordon, L., Dias, J., Ramirez, M., Stilwagen, S., Phan, H., Velasco, N., Do, L., Regala, W., Terry, A., Garnes, J., Danganan, L., Erler, A., Christensen, M., Georgescu, A., Avila, J., Liu, S., Attix, C., Andreise, T., Trankheim, M., Amico-Keller, G., Coefield, J., Duarte, S., Lucas, S., Bruce, R., Thomas, P., Quan, G., Kronmiller, B., Arellano, A., Sanders, C., Ow, D., Nolan, M., Trong, S., Kobayashi, A., Olsen, A., Sand Carrano, A.V.
Sequence analysis of a 1.9 Mb region in 19q13.2 between APOE and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted (30-DEC-1998) Joint Genome Institute, Lawrence Livermore National Laboratory, 7000 East Ave., Livermore, CA 94551, USA (1988)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sequence.
AC006262
AC006262.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 (bases 1 to 107573)
Lamerdin, J.E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (bases 1 to 106320
      /rpt_family="AluJo"
                                                                                                                                                                          /rpt_family="L1MA7"
complement/oran
                                                                                                                                                                                                                                                                                                                                                     /rpt_family="(GGGA)n"
complement(1035, .201
                                                                                                                                                                                                                                                                                                                                                                                                complement(829.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /cell_type="fibroblast"
/note="LLNL clone name: BC264576
from Research Genetics."
                                                                                                                                                                                                                                     rpt_family-"AluJo"
                                                                                                                                                                                                                                                                                                                                                                                                                                           complement(669.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note="DDS similarity to AA456254 zx99d06.rl Soares
NhHMPuS1 Homo sapiens cDNA clone 811883 5'; (3. .215); 100%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /map="19q13.2 between APOE and D19S412"
/clone="CTC-297N14"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Homo sapiens"
/db_xref="taxon:9606"
                                        family="L1MB7"
ement(3805
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GI:15718550
                                                                                                                                                                                                                                                                                                              _family="L1MB7"
lement/???
                                                                                                        family="AluJb"
                                                                                                                                                                                                                                                              family="L1MA7"
ement(220°
                                                                                                                                                                                                                                                                                                                                                                                                                         _family=
                                                                                                                               Ly-"L1MB7"
                                                                                                                                                                                                                                                                                                                                                                                            69. .800)
"(GA)n"
29. .953)
                                                                                                                                                                                                                                                          . 2495)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BAC library obtained
                      repeat_region
                                                                  repeat_region
                                                                                                          repeat_region
                                                                                                                                                      repeat_region
                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                          misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="DDS similarity to overlapping ESTs:
(12144. 12398) AA456254 zx99d06.rl Soares NhHMPuSl Homo
sapiens cDNA clone 811883 5; (270. 5.53); 99%
identity.-(12182. 12411) A1081371 ox76g10.xl
Soares_NhHMPu_Sl Homo sapiens cDNA clone IMACE:1662306 3';
(454. .225); 100% identity.-(12173. .12411) AA454642
zx99d06.sl Soares NhHMPuSl Homo sapiens cDNA clone 811883
3; (455. .217); 100% identity.-(12144. .12411) AA760247
vv74e06.rl Stratagene mouse skin (#937313) Mus.musculus
cDNA clone 1228162 5'; (119. .380); 69% identity."
/note="predicted exon, program: grail2exons_human_l.3,
frame: 2, quality: excellent, score: 90.000"
                                                               /rpt_tam1ly="MER65A"
complement(20427...2
                                                                                                                                                                                                                                                                                            complement [14029. .14445]
//note="predicted exon, program:
frame: 0, quality: good, score:
                                                                                                                                                                                                                                                                                                                                                                /note="DDS similarity to overlapping ESTs: (12603...12818) AA454642 zx99d06.sl Soares NhHMPuS1 Homo sapiens CDNA clone 811883 3'; (216...1); 99% identity-(12600...12823) AIO81371 ox76g10.xl Soares_NhHMPu_S1 Homo sapiens CDNA clone IMAGE:1662306 3'; (224...1); 98% identity-(12600...12656) AA760247 vv74e06.1 Stratagene mouse skin (#937313) Mus musculus cDNA clone Complement(12967...16062); 76% identity."

1228162 5'; (381...429); 76% identity."

1278162 5'; (381...429); 76% identity."
                                                                                                        /rpt_family="AluJo"
complement/1076"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /rpt_family="FLAM_C"
complement(7661 .7916)
/rpt_family="L1"
7938 . .975c
rpt_family="AluJo"
                                                                                                                                                                          /rpt_family-"MLT1B"
                                                                                                                                                                                                                                          /rpt_family="MER11B"
complement/19610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         complement(10866.1.10964)
/note="predicted exon, program: grail2exons_human_1.
frame: 1, quality: excellent, score: 75.000"
11326...11517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        complement(7150. .7485)
/rpt_family="L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            complement(5338. .5369)
/rpt_family="(TA)n"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                rpt_family-"AluJo"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                complement(4110.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          iote-"DDS similarity
iHMPuS1 Homo sapiens
)0% identity."
             _family="(CA)n"
5. .20751
                                                                                                                                                                                                                   family-"MER11A"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      :_family="Aluy"
lement(70=0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   __family="L1PA8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       family="Alusg"
ement(10865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              _family=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             lement(7059. .7080)
_family="AT_rich"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "L1M1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "L1MB7"
                                                                                                      .19870)
                                                                                                                                                                                                                                        .18767)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   to AA456254 zx99d06.rl soares cDNA clone 811883 5'; (216. .269);
                                                                                                                                                                                                                                                                                                     grail2exons_human_1.3,
58.000"
                                                                                                                                                                                                                                                                                                                                                                                                                                                     vv74e06.rl
```

```
ş
                                                                                                                                     В
 밁
                    Š
                                             밁
                                                                 Ş
                                                                                          밁
                                                                                                                                                                                   Matches 418;
                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                      82348
                                                                                          82408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                               misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                   464
                                                                                                                404 GCCTGGAGAAAGAGGCTGGTGTTACCTGAGATCTGGGATGCTGAGTGGCTGTTTGGGGGC
                                                                                                                                                   CAGAGAAACACACACTCAACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCCACCCTGC 523
CAGAGAAACACACACTCAACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCCACCCTGC
                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /rpt_family="AT_rich"

complement(26677. .26941)

/rpt_family="AT_rich"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /rpt_family="AluSx"
complement(27374. .2769)
/rpt_family=""."
                                                                                                                                                                                                                                                                                                                                                             /rpt_fami
29870. .3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /rpt_family="MER45" complement(26586. .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /rpt_family="FLAM_A" complement(24258. .2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               complement(23090...23194)
note="predicted exon, program: frame: 2, quality: good, score: complement(24023...24141)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /rpt_family="Alusx"
21768. .22798
                                                                                                                                                                                                                                                                                                                /rpt_fam1
31175. .3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 complement(24910.
                                                                                                                                                                                                                                            /rpt_f
32619.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /rpt_family-"Alusx"
28987. .29070
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /rpt_family="AluJb"
complement/2122
                                                                                                                                                                                                                                                                           /rpt_family="Alusg"
complement(31707. .32005)
/rpt_family="Alusg"
                                                                                                                                                                                                                                                                                                                                                                                                        /rpt_family="MER4D"
29527. .29826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /rpt_family="MER11A"
                                                                                                                                                                                                                                                       complement(32050 32614)
/rpt_family="MLT2D"
                                                                                                                                                                                                                                                                                                                                                                                                                               29332. .29526
                                                                                                                                                                                                                                                                                                                                                                                                                                         /note="predicted exon, program: grail2exons_human_1.3,
frame: 2, quality: good, score: 50.000"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /rpt_tamily="
28646. .28929
                                                                                                                                                                                                                                /rpt_family="LTR8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  family="MSTB"
9, .2546"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  _family="Alusg"
3. .28177
                                                                                                                                                                                                                                                                                                                                                                                               fami
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               _family="HERVL"
                                                                                                                                                                                                                                                                                                                                                  _family-"MER4D"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           family-"(TA)n"
                                                                                                                                                                                              41.7%;
99.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       family-"L1M1/2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .21397
                                                                                                                                                                                                                                                                                                                                        0611
                                                                                                                                                                                                                                                                                                                                                                                              .ly-"AluSg"
                                                                                                                                                                                                                                                                                                                         ly-"(GA)n"
                                                                                                                                                                                                                                                                                                                                                                        y-"MER4D"
                                                                                                                                                                                    0;
                                                                                                                                                                                              Score 318; DB 9;
Pred. No. 1.5e-175;
                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             grail2exons_human_1.3, 50.000"
                                                                                                                                                                                                           Length 107573;
                                                                                                                                                                                     Indels
                                                                                                                                                                                    0;
                                                                                                                                                                                    Gaps
                                                                                                                   463
                                                                                            82467
                                                                                                                                         82407
                                                 82527
                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 4
AC007193/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                82648
                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          704
```

```
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    584
                                                                                                                                                                                                                                                                                repeat_region
                     repeat_region
                                                                         repeat_region
                                                                                                                             repeat_region
                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGGCACCACCCCAAGGCTGGCTGGGGAACCCTTCACCCTTCTGTGAGATTTTCCATCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGGCACCACCCCAAGGCTGGGTGGGGAACCCTTCACCCTTCTGTGAGATTTTTCCATCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGCTGATGGGGGCCCAGGGACTCTGAACCCTCCTGATGACCCCTATGGCCAACATCAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGCTGATGGGGGCCCAGGGACTCTGAACCCTCCTGATGACCCSTATGGCCAACATCAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sequence.
AC007193
AC007193.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Lamerdin, J.E., McCready, P.M., Skowronski, E., Viswanathan, V.,
Burkhart-Schultz, K.J., Gordon, L., Dlas, J., Ramirez, M.,
Stilwagen, S., Phan, H., Velasco, N., Do, L., Regala, W., Terry, A.,
Garnes, J., Danganan, L., Erler, A., Christensen, M., Georgescu, A.,
Avila, J., Liu, S., Attix, C., Andreise, T., Trankheim, M.,
Amico-Keller, G., Coefield, J., Duarte, S., Lucas, S., Bruce, R.,
Amico-Keller, G., Coefield, J., Duarte, S., Lucas, S., Bruce, R.,
Thomas, P., Quan, G., Kronmiller, B., Arellano, A., Sanders, C., Ow, D.,
Nolan, M., Trong, S., Kobayashi, A., Olsen, A.S. and Carrano, A.V.
Sequence analysis of a 1.9 Mb region in 19q13.2 between APOE and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AC007193 146180 bp DNA linear PRI 17-JUN Homo sapiens chromosome 19, BAC 82621 (CIT-B-139a18), complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Submitted (02-APR-1999) Joint Genome Institute, Lawrence Livermore National Laboratory, 7000 East Ave., Livermore, CA 94551, USA. Map and sequence oriented from q centromere to telomere. BAC 82621 (CIT-B-139al8) overlaps BAC 264576 (CIT-B-297n14) to the left from bases 1 to 27,487 of this accession, and separated from BAC 89981 (CIT-B-158d10) on the right by a gap of approximately 17 to 23 kb. Additional chromosome 19 map and sequence information may be obtained at: http://www-bio.llnl.gov/bbrp/genome/genome.html.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mammalia; Eutheria; Pr
1 (bases 1 to 146180)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            amerdin,J.E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (bases 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Homo sapiens"
/db_xref="taxon:9606"
/chromosome="19"
                                                                              complement(1857. .1974)
                                                                                                                                                                                                                                                                                                                                                               /note="LLNL clone name:
Research Genetics."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1. .146180
                                                /rpt_family-"FLAM_A"
                                                                                                                                                                                /rpt_family="L1"
1159. .1453
                                                                                                                                                                                                                                                                                                                                                                                                                                           /cell_line="987SK"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /map="19q13.2 between APOE
/clone="BC82621"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
/rpt_family-"LlMB4"
                                                                                                    rpt_family="L1"
                                                                                                                                                                                                                                 rpt_family="L1"
|018. .1158
                                                                                                                                                                                                                                                                                  'rpt_family="L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ç
                                                                                                                                                        :_family="AluSx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       146180)
                                                                                                                                                                                                                                                                                                                                                                                                                     type-"fibroblast"
                                                                                                                                                                                                                                                                                                                                                                                               BC82621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    D19S412'
                                                                                                                                                                                                                                                                                                                                                                                               BAC library obtained
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRI 17-JUN-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         82647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       82707
```

```
repeat_region
                                        repeat_region
                                                                   repeat_region
                                                                                               repeat_region
                                                                                                                         repeat_region
                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                            repeat_region
                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
             complement(14859. .15153)
/rpt_family="AluSx"
15226. .15492
                                                                                                      complement(14009..14105)
/rpt_family="LlMC/D"
                                                                                                                                              complement(13709. .14037)
                                                                                                                                                                            complement(13482
                                                                                                                                                                                     complement(13356. .13481)
/rpt_family="(GAAA)n"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note-"predicted exon, program: grail2exons_human_1.3,
frame: 2, quality: excellent, score: 81.000"
complement(5169. .5468)
/rpt_family-"Aluy"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         complement(4005...4264)
/rpt_family="Alusx"
complement(4269...4568)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2478. .2549
/rpt_family="LINE2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     complement(2629.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 note="predicted exon, program: grail2exons_human_1.3, rame: 0, quality: good, score: 52.000"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 pt_family="AluSx"
mplement(8575. .8597)
pt_family="AT_rich"
mplement(8598. .8878)
                                                                                                                                                                                                                                                                                                nplement(11833..12138)
bt_family="Alusg"
nplement(12158..12478)
bt_family="LIMC/D"
                                       L_family="LIMC/D"
                                                                                                                                                                                                                                                                                                                                                                                                       plement(11302 ..11517)
t_family="L1MC/D"
                                                                                                                                                                                                      _family="AluSx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                 plement(10999.
                                                                                                                                                                                                                              _family="L1MC/D"
lement(1200)
                                                                                                                                                                                                                                                                                                                                                                          lement(11536...11661)
_family="FLAM_C"
                                                                                 lement(14115. .14415)
_family="AluY"
                                                                                                                                                                                                                                                                                                                                               lement(11667. .11798)
_family="LIMC/D"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      _family="Alusx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ._family="Aluy"
._f3127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         __family="AluJo"
. . . 3655
                                                                                                                                                                                                                                                                                                                                                                                                                   family "Alujo" ement(11300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             _family="(TA)n"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              _family="Alu"
. .7595
                                                                                                                                                                                                                                                                       family="FRAM"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         family-"FLAM"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    family="Alusq"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     _family="AluJb"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   _family="L1" .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             _family-"AluSq"
                                                                                                                                                                                                                                                                                                                                                                                                                                                             family-"AluJb"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .8191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          y≖"Alusx"
                                                                                                                                                    "AluJb"
     Query Match
Best Local Similarity
Matches 29; Conserv
                                                                       repeat_region
                                                                                                repeat_region
                                                                                                                                                                                           misc_feature
                                                                                                                            repeat_region
                                                                                                                                                    repeat_region
                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
 3.8%; Score 29; DB 9; L
ilarity 100.0%; Pred. No. 3.4e-05;
Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                 /rpt_family="Alusc"
complement(28733. .2887>\
/rpt_family=""
                                                         complement(30830.
/rpt_family="MIR"
                                                                                                                                    /note="predicted exon, program: grail2exons_human_1.3,
frame: 2, quality: good, score: 71.000"
complement(29585. 29888)
/rpt_family="Alusg"
                                                                                                                                                                                                                                                                                                                                                                                                                          /rpt_family="(TAA)n"
complement(26257. .26545)
/rpt_family=""
                                                                                  rpt_family="AluJb"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               complement(24403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       complement(23651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /rpt_family="AluJo"
complement(16257. .16340)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         complement(19194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   complement(18818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             complement(18401.
                                                                                                                                                                                                                                                                                                               rpt_family-"AluJ/FLAM"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="predicted exon, program: grail2exons_human_1.3,
frame: 0, quality: good, score: 63.000"
                                                                                                                                                                                                                                                                                                                                                                                                pt_famil
                                                                                                                                                                                                         __family="AluJo"
                                                                                                                                                                                                                                                                                                                                                      _family="Alusx"
5. .28172
                                                                                                                                                                                                                       _family="AluJb"
. , 29001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                _family="LTR7"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             _family="HERVH"
lement/10"
                                                                                                                                                                                                                                                                           family="Alusg"
ement/ouror
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     _family="LTR7"
lemen+/~~
                                                                                                             family-"AluSq"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      _family="HERVH"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    _family="HERVH"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        _family="Alusq"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   _famil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      _family="MER74"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         _family="HERVH"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                famil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         famil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            famil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        _fami
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               _family-"AluJo"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            family="THEIC"
17781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   family-"AluSg"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    _family="(GAAA)n"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       y="Alusp"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            y="L1MD3"
                                                                                                                                                                                                                                                                                                                                        "Alusx"
                                                                                                                                                                                                                                                                                                                                                                                              y-"AluJo"
                                                                                                                                                                                                                                                                                                                                                                                                                       /-"AluJo"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    y-"Alusx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Alusg/x"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "AluJb"
                                                                     .31040)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .23647)
                           Length 146180;
  Indels
 0,
Gaps
0,
```

```
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AX164149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /ERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AC097591/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6043 CAGGCTCCTCTGCTCACACGGAGCCCCAG 6015
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 104 GGCCCCCATGACTCCTTACCT 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
                Nuzny, D.M., Adams, C., Adio-Oduola, B., Ali-Osman, F.R., Allen, C., Alsbrooks, S.L., Amaratunge, H.C., Are, J.R., Banks, T., Barbaria, J., Benton, J., Bimage, K., Blankenburg, K., Bonnin, D., Bouck, J., Bowie, S., Brieva, M., Brown, E., Brown, M., Bryant, N.P., Buhay, C., Bowie, S., Brieva, M., Brown, E., Brown, M., Bryant, N.P., Buhay, C., Burch, P., Burkett, C., Burrell, K.L., Byrd, N.C., Carron, T.F., Carter, M., Cavazos, S.R., Chacko, J., Chavez, D., Chen, G., Chen, R., Chen, Z., Chowdhry, I., Christopoulos, C., Cleveland, C.D., Cox, C., Coyle, M.D., Dathorne, S.R., David, R., Davila, M.L., Davis, C., Coyle, M.D., Dathorne, S.R., David, R., Davila, M.L., Davis, C., Davy-Carroll, L., Dederich, D.A., Delaney, K.R., Delgado, O., Denn, A.L., Ding, Y., Dinh, H.H., Douthwalte, K.J., Delgado, O., Denn, A.L., Ding, Y., Dinh, H.H., Douthwalte, K.J., Delgado, O., Denn, A.L., Ding, Y., Dinh, H.H., Douthwalte, K.J., Delgado, O., Denn, A.L., Ding, Y., Dinh, H.H., Douthwalte, K.J., Delgado, O., Denn, A.L., Ding, Y., Dinh, H.H., Douthwalte, K.J., Delgado, O., Denn, A.L., Ding, Y., Dinh, H.H., Douthwalte, K.J., Delgado, O., Denn, A.L., Ding, Y., Dinh, H.H., Douthwalte, K.J., Delgado, O., Denn, A.L., Ding, Y., Dinh, H.H., Douthwalte, K.J., Delgado, O., Denn, A.L., Ding, Y., Dinh, H.H., Douthwalte, K.J., Delgado, O., Elhaj, C., Edstall, H.H., Garcia, A., Garner, T., Forster, P., Frantz, F., Hart, M., Garcia, A., Garner, T., Garza, N., Ginaratne, P., Hales, J., Harris, K., Hart, M., Havlak, P., Hawes, A., Holloway, C., Harris, K., Hart, M., Havlak, P., Hawes, J., Holloway, C., Harris, K., Hart, M., Havlak, P., Hawes, J., Harris, R., Hart, M., Haylak, P., Hawes, J., Harris, R., Hart, M., Haylak, P., Hawes, J., Harris, R., Hart, M., Haylak, P., Hawes, J., Harris, R., Hart, M., Gunz, J., Hulyk, S., Hume, J., Harris, R., Hart, M., Haylak, P., Hawes, J., Harris, R., Hart, M., Haylak, P., Hawes, J., Harris, R., Harris, R., Hart, M., Haylak, P., Hawes, J., Harris, R., Harris, R., Harris, R., Harris, R., Harris, R., Harris, R., Harr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGCCCCCATGACTCCTTACCT 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CAGGCTCCTCTGCTCACACGGAGCCCCAG 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 48 bp
Sequence 21 from Patent WO0140465.
AX164149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Fong, S., Goddard, A., Godowski, P.J., Grimaldi, C.J., Gurney, A.L., Hillan, K.J., Tumas, D., Watanabe, C.K., Wood, W.I. and Zhang, Z. Compositions and methods for the treatment of immune related
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AC097591
AC097591.3 GI:17970407
HTG; HTGS_PHASE1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  aboub bp DNA Rattus norvegicus clone CH230-170A15, '
***, 43 unordered pieces.
AC097591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Genentech,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Patent:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          synthetic construct.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AX164149.1 GI:14545090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Métazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rattus norvegicus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             artificial sequence.
1 (bases 1 to 48)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (bases 1 to 86606)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO 0140465-A 21 07-JUN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism-"synthetic construct"
/db_xref-"taxon:32630"
/note-"Synthetic oligonucleotide probe"
16 c 9 g 12 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (US)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 21; DB 6; Length 48; Pred. No. 1.8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
Johnson, R., Jolivet, S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 * * *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear |
SEQUENCING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PAT 22-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

gap of contig gap of contig gap of contig gap of

of 3796

of 2903 unknown of 4759 unknown

bp in length length bp in length length length

unknown

2369

5 bp in length
n length
bp in length
n length
n length
n length

unknown of 3171

unknown

2788

length bp in length bp in

length length

gap c gap of contig gap of 8095: 8195:

contig contig gap of

of 3236 bp in length

```
JOURNAL
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Lewis, L., Li, J., Liz, Lichtarge, O., Lieu, C., Liu, W., Liu, W., Loulseged, H., Lozado, R.J., Lu, X., Lucier, A., Lucier, R., Luna, R., Ma, J., Maheshwari, M., Mapua, P., Martin, R., Martindale, A., Martinez, E., Massey, E., Mawhiney, E., McLeod, M.P., Meador, M., Martinez, E., Massey, E., Mawhiney, E., McLeod, M.P., Meador, M., Mei, G., Metzker, M., Miner, G., Miner, Z., Mitchell, T., Mohabbat, K., Morgan, M., Morris, S., Moser, M., Neal, D., Newtson, J., Newtson, N., Nguyen, N., Nguyen, N., Newtson, E., Nwokenkwo, S., Nguyen, N., Nguyen, N., Oviedo, R., Pace, A., Payton, B., Peery, J., Perez, L., Peters, L., Pickens, R., Primus, E., Pu, L.L., Quiles, M., Ren, Y., Rives, M., Rojas, A., Rojubokan, I., Rolfe, M., Stone, H., Shooshtari, N., Sisson, I., Sodergren, E., Sonaike, T., Sparks, A., Stanley, H., Sisson, I., Sodergren, E., Sonaike, T., Sparks, A., Tamerisa, K., Tang, H., Tansey, J., Taylor, C., Taylor, T., Telfrod, B., Thomas, N., Thomas, S., Ward, Moore, S., Warren, R., Washington, C., Walliams, G., Williams, G., Williamson, A., Wlaczyk, R., Wooden, S., Wooley, K., Wu, Y., Wu, Y.F., Zhou, J., Zorrilla, S., Nelson, D., Weinstock, G., and Gibbs, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Direct Submission

Direct Submission

Submitted (20-OCT-2001) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA
On Dec 20, 2001 this sequence version replaced gi:17062373.

Genome Center

Genome Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Worley, K.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Kovar, C., Kratovic, J., Kureshi, A., Landry, N., Leal, B., Lewis, L.C.
* NOTE: Estimated insert size may differ from sequence length

* (see http://www.hgsc.bcm.tmc.edu/docs/Genbank_draft_data.html).

* NOTE: This is a 'working draft' sequence. It currently

* consists of 43 contigs. The true order of the pieces

* is not known and their order in this sequence record is

* arbitrary. Gaps between the contigs are represented as

* runs of N, but the exact sizes of the gaps are unknown.

* This record will be updated with the finished sequence

* as soon as it is available and the accession number will

* be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           findPhrapList
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (bases 1 to 86606)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Consensus quality: 75643 bases at least Q40 Consensus quality: 80572 bases at least Q30 Consensus quality: 85107 bases at least Q20 Consensus quality: 85107 bases at least Q20 Estimated insert size: 68482; sum-of-contigs estimation quality coverage: 0x in Q20 bases; agarose-fp estimation Quality coverage: 0.8x in Q20 bases; sum-of-contigs estimation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Web site: http://www.hgsc.bcm.tmc.edu/
Contact: hgsc-help@bcm.tmc.edu
-----Project Information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Center project name: GGIU Center clone name: CH230-170A15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Center: Baylor College of Medicine Center code: BCM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Assembly program: Phrap; version 0.990329First
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ---- Summary Statistics
```

COMMENT

JOURNAL

```
FEATURES
source
                                     79267
79367
79367
80910
81010
82369
82469
84039
84139
                                                                                                                               63410
64537
65953
66053
66053
66094
68094
68094
69403
71021
71121
71221
71231
71231
71310
74310
74310
74310
74310
                                                                                                                                                                                                                                                    58112
59934
60034
62108
62208
63310
                                                                                                                                                                                                                                                                                                                                                                                  38447
39964
40064
42412
42512
42512
43762
43862
45695
47361
                                                                                                                         76867
                                                                                                                                                                                                                                                                                                                                                                                                                                                        36853
38347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      34991
35091
36753
1. .86606 ,
/organism="Rattus norvegicus"
/db_xref="taxon:10116"
                      Location/Qualifiers
                                                78163: gap of
79266: contig
79366: gap of
80909: contig
81009: gap of
82468: contig
82468: contig
84138: gap of
                             85484: contig of 85584: gap of 86606: contig
                                                                                                                                   contig
gap of
contig
gap of
                                           contig of 1346
                                                                                                               contig
gap of
contig
                                                                                                                                                                                                                 gap o
                                                                                                                                                                                    conti
                                                                                                                                                                                                          gap
                                                                                                                                                                                                                                            conti
                                                                                                                                                                gap of
                                                                                                                                                                       conti
                                                                                                                                                                              gap of
                                                                                                                                                                                            gap o
                                                                                                                                                                                                    conti
                                                                                                                                                                                                                                                                                                                                                            gap of contig
                                                                                                                                                                                                                                                                                                                                                                                                                                 gap of contig gap of contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                             gap of
                                                                                                                                                                                                                                     gap o
                                                                                                                                                                                                                                                                 gap o
                                                                                                                                                                                                                                                                                                                                                                                                     gap of contig
                                                                                                                                                                                                                                                                                                                                                                                                                   gap o
                                                                                                                                                                                                                                                           conti
                                                                                                                                                                                                                                                                                                                                       gap o
                                                                                                                                                                                                                                                                                                                                               cont
                                                                                                                                                                                                                                                                                                                                                                         contig
                                                                                                                                                                                                                                                                                                                                                                                 gap
                             unknown
of 1022
                                                              of 1359
unknown
                                                 of 1570
unknown
                                                                                                  unknown
of 1103
                                                                                                                             of 1255
                                                                                     of.
                                                                                                                     unknown
                                                                                                                                                         of 1200
                                                                                                                                            of 1202
                                                                                                                                                                unknown
                                                                                                                                                                       of 1789
                                                                                                                                                                              unkno
                                                                                                                                                                                     of 1618
                                                                                                                                                                                                          unknown
                                                                                                                                                                                                                 of 194
                                                                                                                                                                                                                              of 1316
                                                                                                                                                                                                                        unknown
                                                                                                                                                                                                                                             of 1127
                                                                                                                                                                                                                                                           of 1102
                                                                                                                                                                                                                                                                         of.
                                                                                                                                                                                                                                                                                                    of.
                                                                                                                                                                                                                                     unknown
                                                                                                                                                                                                                                                                  unknown
                                                                                                                                                                                                                                                                                      of 182;
                                                                                                                                                                                                                                                                                                                                              e
f
                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                            of 1326
                                                                                                                                                                                                                                                                                                                                                                                        e
                                                                                                                                                                                                                                                                                                                                                                                                      of 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1662
                                                                     length
bp in i
                            qd.
                                          ďď
                                                       bp in length
                                                                                                 bp in
                                                                                                                                            ni dq
                                                                                                                                                        bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                     bp in length
                                                  Length
                                                                                                                                                                                   bp in length
                                                                                                                                                                                                                                                                                                                                      bp in length
length
                                                                                                                                                                                                                                                                                                                                                                                                                          bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    bp 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  bp in
length
                                                                                                                     Length
                                                                                                                                    length
                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                     þ
                                                                                                                                                                                                                                                                                                                                                                                                                   ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                       bp in length
length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      bp in
                                                                                                                                                                                                                                                                                                                                                                 length
                                                                                                                                                                                            ength
                                                                                                                                                                                                         ength
                                                                                                                                                                                                                       ength
                                                                                                                                                                                                                                                                                                                                                    length
                                                                                                                                                                                                                                                                                                                                                                                             length
                                                                                                                                                                                                                                     ength
                                                                                                                                                                                                                                                    ength
                                                                                                                                                                                                                                                                  ength
                                                                                                                                                                                                                                                                               ength
                                                                                                                                                                                                                                                                                             ength
                                                                                                                                                                                                                                                                                                           .ength
                                                                                                                                                                                                                                                                                                                        ength
                                                                                                                                                                                                                                                                                                                                                                                length
                                                                                                                                                                                                                                                                                                                                                                                                             leng:
                            in length
                                                                                                                                                                                                                                                                                    in length
                                                                                                                                                                                                                                                                                                  in length
                                                                                                                                                                                                                                                                                                                in length
                                                                                                                                                                                                                                                                                                                              in length
                                                                                                                                                                                                                                                                                                                                                         in length
                                                                                                                                                                                                                                                                                                                                                                        in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       in length
                                         length
                                                                    length
                                                                                                length
                                                                                  length
                                                                                                                                         length
                                                                                                                                                                     length
                                                                                                                                                                                                 length
                                                                                                              length
                                                                                                                             length
                                                                                                                                                                                                               length
                                                                                                                                                                                                                             length
                                                                                                                                                                                                                                           length
                                                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                       length
                                                                                                                                                                                                                                                                                                                                                                                      length
                                                                                                                                                                                                                                                                                                                                                                                                     length
                                                                                                                                                                                                                                                                                                                                                                                                                  length
                                                                                                                                                                                                                                                                                                                                                                                                                                length
                                                                                                                                                                                                                                                                                                                                                                                                                                                            length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    length
                                                                                                                                                                                                             δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
```

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                         ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                         RESULT 8
AC009066
LOCUS
                                                           COMMENT
                                                                                                                                                                                   REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                           Db 70942 CCGTCGTGCCCTTGGCCAGGA 70922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Continuation
                                                                                                                                                        AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPCOMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LMFLCHR34_07/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT
                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 21
                                                                                       JOURNAL
                                                                                                                                            JOURNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence split
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LMEICHR34_00
LMEICHR34_01
LMEICHR34_02
LMEICHR34_03
LMEICHR34_03
LMEICHR34_06
LMEICHR34_06
LMEICHR34_06
LMEICHR34_09
LMEICHR34_09
LMEICHR34_10
LMEICHR34_11
LMEICHR34_11
LMEICHR34_11
LMEICHR34_15
LMEICHR34_15
LMEICHR34_15
LMEICHR34_15
LMEICHR34_16
LMEICHR34_16
LMEICHR34_16
LMEICHR34_16
LMEICHR34_16
LMEICHR34_16
LMEICHR34_16
LMEICHR34_16
LMEICHR34_16
LMEICHR34_17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          199 CCGTCGTGCCCTTGGCCAGGA 219
 -----Genome Center
Center: Joint Genome Institute
Center Code: JGI
Web site: http://www.jgi.doe.ga
                                          2 (bases 1 to 152815)
2 (bases 1 to 152815)
DOE Joint Genome Institute.
DOE Joint Genome Institute.
Simplified (03-AUG-1999) Production Sequencing Facility, DOE Joint Genome Institute, 2800 Mitchell Drive, Walnut Creek, CA 94598, USA On Jul 18, 2000 this sequence version replaced gi:7689895.
                                                                                                                                                                                                                                                                             152815 bp DNA linear HTG 18-JUL-2000 Homo sapiens chromosome 16 clone RP11-309014, WORKING DRAFT SEQUENCE, 15 ordered pieces.
                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases. 1 to 152815)

DOE Joint Genome Institute.

Sequencing of Human Chromosome 16

Unpublished
                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                 21; Conservative 0;
                                                                                                                                                                                                                                                AC009066.5 GI:9256122
HTG; HTGS_PHASE2; HTGS_DRAFT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
21; Conserv
                                                                                                                                                                                                                                          uman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /clone="CH230-170A15"
23615 a 17813 c 17427 g 2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of 18)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            into
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
http://www.jgi.doe.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1700001 1720777
of LMFLCHR34 from base 700001 (AL499623 Leishmania major chrom
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1400001
1500001
1600001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1000001
1100001
1200001
1300001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Begin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              50000:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          fragments
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 21;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1210000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1010000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            End
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 21;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LOCUS LMFLCHR34 Accession AL499623
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23494 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                1.8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2
                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 110000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4257 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 86606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

```
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BASE COUNT
                                      AC096247/c
                                                                                                                                                                                                         Db 100610 ATGCTGAGTGGCTGTTTGGGG 100630
                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                           441 ATGCTGAGTGGCTGTTTGGGG 461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Estimated insert size: 160590; agarose-fp estimation Estimated insert size: 152165; sum-of-contigs estimation Quality coverage: 6.7 in Q20 bases; agarose-fp estimation Quality coverage: 7.08 in Q20 bases; sum-of-contigs estimation.* NOTE: This is a 'working draft' sequence. It currently
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Consensus quality: 140613 bases at least Q40 Consensus quality: 148582 bases at least Q30 Consensus quality: 150226 bases at least Q20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Summary Statistics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Center clone name: RPCI-11_309014
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Center Project Name: 525371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Project Information
    AC096247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        is believed to be correct as given, of the gaps between them are hased
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  consists of 15 contigs. Gaps between the contigs are represented as runs of N. The order of the pieces is helieved to be correct as given, however the sizes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      provided by the submittor. This sequence will be replaced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              the accession number will be preserved.
1 1799: contig of 1799 bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          40215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the
                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gaps between them are based on estimates that have
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        finished sequence as soon as it is available and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone="RP11-309014"
/clone_lib="RPCI human BAC library 11"
31837 c 33501 g 45857 t 1405 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                   2.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              contig of 1476 bp in length
gap of unknown length
contig of 10099 bp in length
gap of unknown length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gap of unknown length
contig of 2821 bp in length
gap of unknown length
contig of 3034 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gap of unknown contig of 1710
                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gap o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gap of unknown contig of 1208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gap o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        contig
                                                                                                                                                                                                                                                                                                                                                                                                                   Score 21; DB 2; Pred. No. 1.8;
159759 bp
                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  of unknown
ig of 3638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         g of 4534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     unknown length of 54862 bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              of 14280 bp in length
unknown length
of 23411 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      of 23578 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        of 2488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         of 2477
    DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 length
                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 152815;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 length
        HTG 20-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Burch, P., Burkett, C., Burrell, K.L., Byrd, N.C., Carron, T.F., Carter, M., Cavazos, S. K., Chacko, J., Chavez, D., Chen, G., Chen, R., Chen, Z., Chowdhry, I., Christopoulos, C., Cleveland, C.D., Cox, C., Coyle, M.D., Dathorne, S.R., David, R., Davila, M.L., Davis, C., Coyle, M.D., Dathorne, S.R., David, R., Davila, M.L., Davis, C., Davy-Carroll, L., Dederich, D.A., Delaney, K.R., Delgado, O., Denn, A.L., Ding, Y., Dinh, H.H., Douthwalte, K.J., Draper, H., Dugan-Rocha, S., Durbin, K.J., Farnhart, C., Edgar, D., Edwards, C.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Benton,J., Bimage,K., Blankenburg,K., Bonnin,D., Bouck,J.,
Bowie,S., Brieva,M., Brown,E., Brown,M., Bryant,N.Po., Buhay,C.,
Burch,P., Burkett,C., Burrell.K.T. Burd N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Submitted (17-SEP-2001) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA On Dec 20, 2001 this sequence version replaced gi:15627867.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Peery, J., Perez, L., Peters, L., Pickens, R., Primus, E., Pu, L., Quiles, M., Ren, Y., Rives, M., Rojas, A., Rojubokan, I., Rolfe, M., Ruiz, S., Savery, G., Scherer, S., Scott, G., Shen, H., Shooshtari, N., Sisson, I., Sodergren, E., Sonaike, T., Sparks, A., Stanley, H., Stone, H., Sutton, A., Svatek, A., Tabor, P., Tamerisa, A., Tamerisa, K., Tangy, H., Tansey, J., Taylor, T., Telfrod, B., Thomas, N., Thomas, S., Usmani, K., Vasquez, L., Vera, V., Villalon, D., Vinson, R., Wallington, S., Walliamson, S., Walliamson, R., Washington, C., Wau, Y., Wu, Y.F., Zhou, J., Zorrilla, S., Nelson, D., Worley, K., Wooden, S., Walliamson, R., Walla, S., Nelson, D., Vinson, R., Walliamson, S., Williamson, Walliamson, S., Walliamson, Walliamson, S., Wall
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Lewis, L., Li, J., Li, Z., Lichtarge, O., Lieu, C., Liu, J., Liu, W., Loulseged, H., Lozado, R.J., Lu, X., Lucler, A., Lucler, R., Luna, R., Ma, J., Mahsshwari, M., Mapua, P., Martin, R., Martindale, A., Martinez, E., Massey, E., Mawhiney, E., McLeod, M.P., Meador, M., Mei, G., Metzker, M., Miner, G., Miner, Z., Mitchell, T., Mohabbat, K., Mes, M., Morris, S., Moser, M., Neal, D., Newtson, J., Newtson, N., Morgan, M., Nguyen, N., Neal, D., Newtson, J., Newtson, N., Nguyen, A., Nguyen, N., Nickerson, E., Nwokenkwo, S., Oguh, M., Okwuonu, G., Oragunye, N., Oviedo, R., Pacca, B., Patron, B., Pacca, Pa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Muzny,D.M., Adams,C., Adio-Oduola,B., Ali-osman,F.R., Alsbrooks,S.L., Amaratunge,H.C., Are,J.R., Banks,T., E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Mētazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sclurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rattus norvegicus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HTG; HTGS_PHASE1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rattus norvegicus clone CH230-30J6, *** SEQUENCING IN PROGRESS ***
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rattus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Worley, K., Wu, C., Wu, Y., Wu, Y.F., Weinstock, G. and Gibbs, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Direct Submission
                                                                                                                                findPhrapList
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (bases 1 to 159759)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (bases 1 to 159759)
                                                                                                                                                                                                                                                                                                                                              Web site: http://www.hgsc.bcm.tmc.edu/
Contact: hgsc-help@bcm.tmc.edu
------ Project Information
    Consensus quality:
Consensus quality:
Consensus quality:
                                                                                                                                                                                                                                                        Center project name: GETL Center clone name: CH230-30J6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Center code: BCM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Center: Baylor College of Medicine
                                                                                                                                                                       Assembly program: Phrap; version 0.990329First call to
                                                                                                                                                                                                                      Summary Statistics
                                                                                                                                                                                                                                                                                                                                          Project Information
        121344 bases at least Q40
131650 bases at least Q30
140303 bases at least Q20
```

Tamerisa, K.

Edwards, C.C.,

```
NOTE: Estimated insert size may differ from sequence length (see http://www.hgsc.bcm.tmc.edu/docs/Genbank_draft_data.html).

NOTE: This is a 'working draft' sequence. It currently consists of 74 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as 'runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will
       13809
18732
18832
18832
18832
18832
23051
23151
23151
23151
23151
23151
23151
24185
30156
30156
30156
30156
30156
30156
30156
318792
41807
45280
48516
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
65186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Estimated insert size: 121638; sum-of-contigs estimation Quality coverage: 0x in Q20 bases; agarose-fp estimation Quality coverage: 1.9x in Q20 bases; sum-of-contigs estimation
               79064:
81524:
81524:
83011:
83111:
83151:
85456:
85456:
87032:
87132:
88950:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6091:
6191:
13708:
13808:
13808:
                                      gap of contig
                                                       gap o
                                                                                                                                                gap of contig
                                                                                                                                                                         contig
gap of
contig
gap of
gap of
contig
gap of
contig
gap of
contig
gap of
contig
gap. of
                                                                                                                         gap of contig
                                                                                                                                          conti
                                                                                                                                                                                                                                                                                                               gap of
                                                                                                                                                                                                                                                                                                                                       contig
                                                                                                                                                                                                                                                                                                                                                        gap of
contic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    contig
gap of
contig
                                                                                                                                                                                                                                                                                                      gap of
                                                                                                                                                                                                                                                                                                                                                                                                          gap o
                                                                                                                                                                                                                                                                                                                                                                                 conti
                                                                                                                                                                                                                                                                                                                                                                                         gap o
                                                                                                                                                                                                                                                                                                                                                                                                 conti
                                                                                                                                                                                                                                                                                                                                                                                                                            gap of
                    unknown
of 2460
unknown
of 1387
unknown
of 2245
unknown
of 1718
                                                                                                      unknown
of 1168
unknown
of 1864
                                                                                                                                        unknown
of 2223
unknown
of 1330
                                                                                                                                                                                                                                                            unknown
of 3041
                                                                                                                                                                         of 1199
                                                                                                                                                                                                          unknown
of 2623
                                                                                                                                                                                                                           unknown
of 2498
                                                                                                                                                                                                                                             unknown
of 3621
                                                                                                                                                                                                                                                                             unknown
of 2039
                                                                                                                                                                                                                                                                                             f unknown
g of 2593
f unknown
g of 2876
                                                                                                                                                                                                                                                                                                                              unknown
of 3136
                                                                                                                                                                                                                                                                                                                                               unknown
of 3473
                                                                                                                                                                                                                                                                                                                                                                unknown
of 2915
                                                                                                                                                                                                                                                                                                                                                                                                unknown
of 4061
                                                                                                                                                                                                                                                                                                                                                                                                                  unknown
of 3158
                                                                                                                                                                                                                                                                                                                                                                                                                                   unknown
of 3647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    of 6091
f unknown
of 7517
                                                                                                                                                                                         of 2074
                                                                                                                                                                                                                                                                                                                                                                                                                                                    unknown
of 4219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    unknown
of 4923
                                                                                                                                                                                                   unknown
                                                                                                                                                                                                                                                                                                                                                                                of 4375
                                                                                                                                                                                                                                                                                                                                                                                         unknown
       6 bp 1..
Wn length
bp in length
+h
                                                                       ď
                                                                                                                                                                                                                                            length
bp in
                                                                                       đđ
                                                                                                                                       ď
                                                                                                                                                        ģ.
                                                                                                                                                                         ď
                                                                                                                         bp in
                                              length
                                                                                                                length
                                                                                                                               length
                                                                                                                                                                 Length
                                                                                                                                                                                         ni dq
                                                                                                                                                                                                                                                             length
bp in
                                                                                                                                                                                                                                                                                                                               length
bp in
                                                                                                                                                                                                                                                                                                                                                                length
bp in ]
                                                               length
                                                                              length
                                                                                                length
                                                                                                                                                 length
                                                                                                                                                                                                                  length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            bp in 1
                                                                                                                                                                                                  length
                                                                                                                                                                                                                                                                                                                                                        length
                                                                                                                                                                                                                                                                                                                      ength
                                                                                                                                                                                                                                                                                                                                                                                        ength
                                                                                                                                                                                                                                                                                                                                                                                                        ength
                                                                                                                                                                                                                                                                                                                                                                                                                          ength
                                                                                                                                                                                                                                                                                                                                                                                                                                          ength
                                                                                                                                                                                                                                                                                                                                                                                                                                                           .ength
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ength
                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   in length
   length
                                                     length
                                                                     length
                                                                                     length
                                                                                                                      length
                                                                                                                                                       length
                                                                                                                                                                        length
                                                                                                       length
                                                                                                                                       length
                                                                                                                                                                                        length
                                                                                                                                                                                                         length
                                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                            length
                                                                                                                                                                                                                                                                                                                                                             length
                                                                                                                                                                                                                         length
                                                                                                                                                                                                                                                                                           length
                                                                                                                                                                                                                                                                                                            length
                                                                                                                                                                                                                                                                                                                             length
                                                                                                                                                                                                                                                            length
                                                                                                                                                                                                                                                                                                                                              length
                                                                                                                                                                                                                                                                                                                                                                               length
                                                                                                                                                                                                                                                                                                                                                                                               length
                                                                                                                                                                                                                                                                                                                                                                                                               length
                                                                                                                                                                                                                                                                                                                                                                                                                                length
                                                                                                                                                                                                                                                                                                                                                                                                                                                 length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   length
                         ACCESSION VERSION
                                                           RESULT 10
AC026963/c
LOCUS
SOURCE
ORGANISM
                                                  DEFINITION
                 KEYWORDS
                                                                                                                                           Query Match
Best Local
                                                                                                Matches
             Homo sapiens chromosome 18 cl
SEQUENCE, 32 unordered pieces
AC026963
AC026963.2 GI:8901252
HTG; HTGS_PHASE1; HTGS_DRAFT.
       human.
                                                          AC026963
                                                                                                                                           Similarity
                                                                                                                                                                   123783
1262183
126313
126313
127702
127702
12878
128978
130451
131572
131572
131673
132967
sapiens
                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                 117967
119526
119626
121098
121198
                                                                                                                                                                                                                                                                                                                                                          114852
116308
116408
117867
                                                                                                                                                                                                                                                                                                                                                                                            102439
102539
104344
104444
106544
106546
108916
109016
110826
110926
112774
112874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         90856
90956
92018
92118
93488
93588
95225
95325
97111
97111
99701
                                      178954 bp chromosome 18 clone unordered pieces.
                                                                                                                               2.8%; July 100.0%; Pr
                                                                                                                                                                    134526:
134626:
                                                                                                                                                                                                                                                                                                                                                                                   16307:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4: gap of
0: contig
0: gap of
                                                                                                                                 Score 21; DB; Pred. No. 1.8
                                                                                                                                                                 gap of
contig
gap of
                                                                                                                                                                                           gap o
                                                                                                                                                                                                            gap of contig gap of contig
                                                                                                                                                                                                                                                             gap of contic
                                                                                                                                                                                                                                             gap o
                                                                                                                                                                                                                                                                               gap o
                                                                                                                                                                                                                                                                                              gap c
conti
gap c
conti
                                                                                                                                                                                                                                                                                                                                gap of
                                                                                                                                                                                                                                                                                                                                                         gap
                                                                                                                                                                                                                                                                                                                                                                                                          contig
                                                                                                                                                                                                                                                                                                                                                                                                                                     gap of contig
                                                                                                                                                                                                                                                                                                                                                                         gap o
                                                                                                                                                                                                                                                                                                                                                                                          gap o:
                                                                                                                                                                                                                                                                                                                                                                                                                            gap of
                                                                                                                                                                          unknown
of 1560
                                                                                                                                                                                                           unknown
of 1373
unknown
of 1121
                                                                                                                                                                                           unknown
of 1195
                                                                                                                                                                                                                                             unknown
of 1176
                                                                                                                                                                                                                                                             unknown
of 1289
                                                                                                                                                                                                                                                                             unknown
of 2330
                                                                                                                                                                                                                                                                                              unknown
of 1351
                                                                                                                                                                                                                                                                                                               unknown
of 1134
                                                                                                                                                                                                                                                                                                                              f unknown
of 2372
f unknown
f unknown
f unknown
g of 1848
g of 1878
f unknown
g of 1459
f unknown
g of 1472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    f unknown
g of 1688
f unknown
g of 1450
f unknown
f unknown
f of 1805
f unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       unknown
of 1637
unknown
of 1786
                                                                                                                                                                   unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        unknown
of 1890
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                of 1062
unknown
                                               RP11-294A3
                                                                                                                                          1.8;
                                                                                                                                                  B
                                                                                                                                                                                         length bp in langth bp in langth bp in langth bp in langth be in langth bp in langth
                                                                                                                                                 .
در
                                                                                                                                                                 bp in length
                                                                                                                                                                                                                                                                                                                                                               nr dq
                                                                                                                                                                                                                                                                                            length
bp in length
                                                                                                                                                                                                                                                                                                                                                                                                dq
                                                                                                                                                                                                                                                                                                                                                                                                                           bp in :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   length
bp in length
                                                                                                                                                                                                                                                                                                                                                bp in
                                                                                                                                                                                                                                                                                                                                                                                ď
                                                                                                                                                                                                                                                                                                                                                                                                                  ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       dq
                                                                                                                                                                                                                                                                                                                      length
                                                                                                                                                                                                                                                                                                                                        length
                                                                                                                                                                                                                                                                                                                                                         length
                                                                                                                                                                                                                                                                                                                                                                                                                                                    bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ďď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                            length
                                                                                                                                                                                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                lengt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         length
bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                            length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                length
                                                                                                                                                 Length 159759;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      'n
                                                                                                                                                                                                                                                                                                                                                                                                                 in length
                                                                                                                                                                                                                                                                                                                                                                                                                                length
                                                                                                                                                                                                                                            length
                                                                                                                                                                                                                                                                            length
                                                                                                                                                                                                                                                                                                                                                                                               length
                                              linear
3 map 18,
                                                                                                                                                                                                                           length
                                                                                                                                                                                                                                                                                                             length
                                                                                                                                                                                                                                                                                                                                               length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     length
                                                                                                                                                                                         length
                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                             length
                                                                                                                                                                                                                                                                                                                              length
                                                                                                                                                                                                                                                                                                                                                               length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    length
                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                length
                                                                                                                                                                                                                                                                                                                                                                                                                                                   length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         length
                                              HTG 03-JUL-2000
WORKING DRAFT
                                                                                                                                0,
                                                                                                                               Gaps
```

```
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         submitted (25-MAR-2000) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA on Jul 3, 2000 this sequence version replaced gi:7328842.
All repeats were identified using RepeatMasker:
Smit, A.F.A. & Green, P. (1996-1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Howland, J. C., Illev, I., Johnson, R., Jones, C., Kann, L., Karatas, A., Klein, J., LaRocque, K., Lamazares, R., Landers, T., Lehoczky, J., Levine, R., Lieu, C., Liu, G., Locke, K., Macdonald, P., Marquis, N., McCarthy, M., McEwan, P., McGurk, A., McKernan, K., McPheeters, R., McCarthy, M., McEwan, P., McGurk, A., McKernan, K., McPheeters, R., Meldrin, J., Meneus, L., Mihova, T., Miranda, C., Mlenga, V., Morrow, J., Murphy, T., Naylor, J., Noman, C.H., O'Connor, T., O'Donnell, P., O'Nell, D., Olivar, T. M., Oliver, J., Peterson, K., Pierre, N., Pisani, C., Pollara, V., Raymond, C., Riley, R., Rogov, P., Rothman, D., Pisani, C., Pollara, V., Raymond, C., Riley, R., Rogov, P., Rothman, D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Stange-Thomann,N., Stojanovic,N., Subramanian,A., Talamas,J., Tesfaye,S., Theodore,J., Tirrell,A., Travers,M., Trigilio,J., Vassiliev,H., Viel,R., Vo,A., Wilson,B., Wu,X., Wyman,D., Ye,W.J., Young,G., Zainoun,J., Zimmer,A. and Zody,M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Campopiano, A., Castle, A., Choep
Collymore, A., Cooke, P., DeArell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Birren, B., Linton, L., Nusbaum, C., Lander, E., Abraham, H., Allen, N., Anderson, S., Baldwin, J., Barna, N., Bastlen, V., Beda, F., Boguslavkly, L., Boukhgalter, B., Brown, A., Burkett, G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Birren, B., Linton, L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Dodge,S., Domino,M., Doyle,M., Ferreira,P., FitzHugh,W., Gage,D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         http://ftp.genome.washington.edu/RM/RepeatMasker.html
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Direct Submission
                                                                                                                                                                       arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
                                                                                                                                                                                                                                                                  NOTE: This is a 'working draft' sequence. It currently consists of 32 contigs. The true order of the pieces is not known and their order in this sequence record is.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (bases 1 to 178954)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Center project name: L8505
Center clone name: 294_A_3
Center clone name: 294_A_3
Center clone name: 394_A_3
Sequencing vector: M13; M77815; 100% of reads
Chemistry: Dye-terminator Big Dye; 100% of reads
                                                                                                                                                                                                                                                                                                                                                                                                             Assembly program: Phrap; version 0.960731
Consensus quality: 164858 bases at least Q40
Consensus quality: 171910 bases at least Q30
Consensus quality: 174306 bases at least Q20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Quality coverage: 4.3 in Quality coverage: 4.4 in
                                                                                                                                                                                                                                                                                                                                                                             Insert size: 180000;
Insert size: 175854;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Center: Whitehead Institute/ MIT Center for Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Center code: WIBR
                                                                                                                      1261 1360: gap
1361 2401:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Santos, R., Schauer, S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eutheria;
                                             4 4193: gap 4
4 5657:
           5757: gap
7508:
                                                                                                       2501:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        - Genome Center
                                                                                  1: gap
4093:
                                                                                                                                                            1260:
                                                                                                                                                                                                                                                                                                                                                          180000; agarose-fp
175854; sum-of-contigs
age: 4.3 in Q20 bases;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Primates;
                                                              contig of 1592 L
                              contig of
                                                                                                   contig of 1041 bp in of 100 hr
                                                                                                                                         contig of 1260 bp in of 100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Nusbaum, C. and Lander, E. ne 18, clone RP11-294A3
             contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              L8505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Choepel, Y., Colangelo, M., Collins, S.,
     100
1751
                                                                                                                                                                                                                                                                                                                                             Q20 bases; agarose-fp
Q20 bases; sum-of-contigs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Severy, P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ano, K., Dewar, K., Diaz, J.S
                                                  1464 bp in length
               þþ
                                                                                    bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Spencer, B.
                                                                                                                        length
                                                                                                                                                            length
                                                                                      length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of reads
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Research
                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                source
                                                      misc_feature
                                                                                          misc_feature
                                                                                                                            misc_feature
                                                                                                                                                                                                   misc_teature
                    misc_feature
                                                                                                                                                                                                                                                                                                                                                                                   64960 165059:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             94266 94365:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                51779 51878:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            56628 56727:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15985 46084:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     192 78291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 40641:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 86840:
                                                                                                                                                                                                                                                                                                                                             u 178954: contig of 13895
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9930: contig of 2322 bp in length
10030: gap of 100 bp
11954: contig of 1924 bp in length
12054: gap of 100 bp
1202: contig of 3148 bp in length
                                                                                                                                                                                                                                       /clone="RP11-294A3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          37010:
/note-"assembly_fragment"
                    /note="assembly_fragment"
7609: .9930
                                                                     note-"assembly_fragment"
                                                                                                           'note-"assembly_fragment"
                                                                                                                                                                                                                    /clone_lib="RPCI-11 Human Male BAC"
                                                                                                                                                                                                                                                                             'chromosome="18"
                                                                                                                                                                                                                                                                                              /db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                               organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              33217:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               28911:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23657:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20263:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15302:
                                                                                                                                             note-"assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  56627:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         28811: cont
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            51778: cont
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   33117:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       365: gap of 100 bp
101783: contig of 7418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         36910:
                                                                                                                                                                                                                                                                                                                                                                  178954: cont
                                                                                                                                                                                                                                                                                                                                                                                                       164959:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          108250:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60: gap of 100 bp
20163: contig of 2403 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               290: gap of 29743: cont.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .40: gap of 1
94265: contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              86740: contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          64204: contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 41: gap of 100 bp
45984: contig of 5343 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       40541: contig of 3531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  63: gap of 100 bp
23557: contig of 3294 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      04: gap of 1
71466: contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                         51653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             38898:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7660: contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8191: contig of
                                                                                              . 5657
                                                                                                                                                                                 assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ap of 100 bp contig of 4206 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                      gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                          gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 contig of 5694 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             p of 100 bp
contig of 3070 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               contig of 1984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         contig of 3693 bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ap of 100 bp
contig of 10453 h
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           contig of 4749 bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                  rp or 100 bp contig of 12655 b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           contig of 9055
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             p of 100 bp contig of 10840 k
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ap of 100 bp contig of 6367 bp
                                                                                                                                                                                                                                                                                                                                                                                                  contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100 bp
of 7162 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2358 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  đđ
                                                                                                                                                                                                                                                                                                                                                                                                                          å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              đq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           bp in length
                                                                                                                                                                                                                                                                                                                                                                     ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                         bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   bp in length
                                                                                                                                                                                                                                                                                                                                                                                                     bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                in length
                                                                                                                                                                                                                                                                                                                                                                     in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           length
```

```
RESULT 11
AC103584/c
                                                                                                                                                                                                                                                                                                      Ş
                                             REFERENCE
                                                                                                                                                                                                                                                                             밁
                                                                                                   SOURCE
ORGANISM
                                                                                                                                                                                       DEFINITION
                                                                                                                              KEYWORDS
                                                                                                                                                            CCESSION
                                                                                                                                                                                                         Snoor
AUTHORS
TITLE
JOURNAL
                                                                                                                                                ERSION
                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                           61743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             · misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                          misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                      misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               misc_feature
                                                                                                                                                                                                                                                                                       441 ATGCTGAGTGGCTGTTTGGGG 461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       misc_feature
                                                                                                                                                                                                                                                                          ATGCTGAGTGGCTGTTTGGGG 61723
         Bovidae; Bovinae; Bos,
1 (bases 1 to 179982)
Lau.C.C. and Roe,B.A.
Bos taurus BAC Clone rp42-51p13
                                                                                                                                                                                  AC103584 179982 bp DN Bos taurus clone rp42-51p13, WORKING
                                                                                                                                                                                                                                                                                                                                    21;
                                                                                                   Bos taurus
                                                                                                                           AC103584.4 GI:18390279
HTG; HTGS_PHASE1; HTGS_DRAFT
                                                                                                                                                                                                      AC103584
                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutel
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora;
                                                                                                                                                                                                                                                                                                                                2.8%;
llarity 100.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                         /note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  vector_side:right"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        clone_end:SP6
                                                                                                                                                                                                                                                                                                                                                                                                          /note="assembly_fragment"
|08351. .119190
                                                                                                                                                                                                                                                                                                                                                                                                                                     'note="assembly_fragment"
.01884. .108250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'note assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             note="assembly_fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  note assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          note="assembly_fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     'note="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    note="assembly_fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      one_end:T7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    or_side:left"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         e-"assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  e-"assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            e="assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 e-"assembly_fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              assembly_fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "assembly_fragment'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .40541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .64204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .51778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         :36910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .28811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .15202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .78191
                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                             Score 21; DB 2;
Pred. No. 1.8;
                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                    DRAFT
                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                                                                           Length 178954;
                                                                                                                                                                                 SEQUENCE,
                                                                                                                                                                               HTG 29-JAN-2002
                                                                              Euteleostomi;
                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                             0
```

```
SOURCE
                                                                                                                                                                                                              RESULT 12
AC007225
                                                       REFERENCE
                                                                                                                                   KEYWORDS
                                                                                                                                                   VERSION
                                                                                                                                                                    DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                         BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                   POCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 21
                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                              65193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                            70
                                                                                                                                                                                                                                                                           TCTCCAGGCTCCTCTCCTCAC 65173
                                                                                                                                                                                                                                                                                                        TCTCCAGGCTCCTCTGCTCAC 90
                                                                                                                                           218892 bp DNA linear PRI 1
Homo sapiens chromosome 16 clone RPCI-11_480G7, complete
AC007225
AC007225.2 GI:6715703
Bruce,D., Mundt,M., Doggett,N., Munk,C., Saunders,E., Robinson,D.,
Jones,M., Buckingham,J., Chasteen,L., Thompson,S., Goodwin,L.,
Bryant,J., Tesmer,J., Meincke,L., Longmire,J., White,S., Tatum,O.,
                                                    Homo sapiens Eutheria; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 218892)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Direct Submission
Submitted (29 NOV-2001) Department Of Chemistry And Biochemistry,
The University Of Oklahoma, 620 Parrington Oval, Room 208, Norman
                                                                                                                    numan.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OK 73019, USA
ON Jan 29, 2002 this sequence version replaced g1:18139437.
Center: Department Of Chemistry And Biochemistry
The University Of Oklahoma
                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Center code: UOKNOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Lau, C.C.
                                                                                                                                                                                                                                                                                                                                                                                                                        46071 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NOTE: This is a 'working draft' sequence. It currently consists of 11 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       be preserved
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 179982)
                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                45693
45793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1037
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2013
2113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              and
                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Bos taurus"
/db_xref="taxon:9913"
/clone="rp42-51p13"
/ 43236 c 41984 g 47663 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ocation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  119784: contig
119884: gap of
179982: contig
                                                                                                                                                                                                                                                                                                                                                      2.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Roe, B.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               79892: contig
79992: gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2012: contig of 2012 bp in length 2112: gap of unknown length 6595: contig of 4483 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qualifiers
                                                                                                                                                                                                                                                                                                                                                      Score 21;
; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gap
                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        f unknown length
g of 14360 bp in
f unknown length
g of 16378 bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             f unknown length
g of 17622 bp in
f unknown length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       of 3675
unknown
of 4617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 of 39792 bp in unknown length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          unknown
of 5028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           unknown length of 10917 bp in
                                                                                                                                                                                                                                                                                                                                                      1.8;
                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    n length
3 bp in length
n length
                                                                                                                                                                                                                                                                                                                                                                     2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        bp in
length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      bp in
length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                   1028 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           length
                                                                                                                                                                                            PRI 19-JAN-2000
                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Norman,
                                                                                                                                                                                                                                                                                                                                   0
```

repeat_region complement(9323. 9630) /rpt_family="Alu" repeat_region complement(9671. 9990) /rpt_family="Alu" repeat_region complement(9919. 10260) /rpt_family="Alu" repeat_region complement(10375. 10556) /rpt_family="Alu" repeat_region complement(10575. 10867) /rpt_family="Alu" repeat_region complement(10864. 11169) /rpt_family="Alu" repeat_region complement(1115811365)	repeat_region 65766652  repeat_region 66666977  repeat_region 70637149  repeat_region 70637149  repeat_region 71397283  repeat_region 71397283  repeat_region 7283  repeat_region 72847656)  repeat_region 72847656)  repeat_region 72848501)  repeat_region 7284 .8501)  repeat_region 7284 .8501	/orban	AL Submitted Genome In Alamos, IN CE 4 (bases RS Bruce,D., Bryant,J., Campbell,Campb	Campbell,C., Fawcett,J., Maltble,M., Bussod,M., Sutherland,R.,  TITLE Sequencing of Human Chromosome 16q12  JOURNAL Unpublished  REFERENCE 2 (bases 1 to 218892)  AUTHORS Ricke,D.O.  TITLE Comparison Analysis (SCAN) System  JOURNAL Unpublished  REFERENCE 3 (bases 1 to 218892)  AUTHORS Bruce,D., Mundt,M., Doggett,N., Munk,C., Saunders,E., Robinson,D.,  Jones,M., Buckingham,J., Chasteen,L., Thompson,S., Goodwin,L.,  Bryant,J., Tesmer,J., Maltble,M., Bussod,M., Sutherland,R.,  MCMurry,K., Han,C. and Deaven,L.
	repeat_region repeat_region repeat_region repeat_region repeat_region	repeat_region repeat_region repeat_region repeat_region repeat_region repeat_region repeat_region repeat_region	00000000000	repeat_region repeat_region repeat_region repeat_region repeat_region repeat_region
/rpt_family="MIR" /rpt_family="MER" 27005. 27290 /rpt_family="Alu" complement(28321. 28625) /rpt_family="Alu" 28663: 28958 /rpt_family="Alu" 20037. 30845 /rpt_family="Alu" 30537. 30845 /rpt_family="Alu" 30537. 30845 /rpt_family="Alu" 31696. 31963 /rpt_family="Alu"	/rpt_tamlly="Alu" 22834 . 23194 /rpt_fam11y="Alu" /rpt_fam11y="Alu" .24226) /rpt_fam11y="Alu" complement(24227 . 24536) /rpt_fam11y="Alu" 25671 . 26079 /rpt_fam11y="Alu" complement(26081 . 26376) /rpt_fam11y="Alu" 26596 /rpt_fam11y="Alu"	/rpt_famlly="HEL1 complement(18506 18805) /rpt_family="Alu" 19158) /rpt_family="Alu" 19158) /rpt_family="Alu" 19897) /rpt_family="Alu" 2049 /rpt_family="Alu" 20677) /rpt_family="Alu" 20677) /rpt_family="Alu" 20677) /rpt_family="Alu" 2027) /rpt_family="Alu" 20276 22479 22226 22479	t_family="Alu" t_family="THE1" t_family="THE1" plement(15425. t_family="Alu" t_family="Alu" t_family="THE1" 03.16179 t_family="THE1" 03.16179 t_family="MSTAR" 71.17910 t_family="THE1" 71.17910 t_family="THE1" plement(17968) t_family="Alu" 18477.	/rpt_family="Alu" complement(1144911512) /rpt_family="MIR" 1154011810 /rpt_family="Alu" complement(1244512839) /rpt_family="Alu" 1305513854 /rpt_family="THE1" 1310613787 /rpt_family="MSTAR" complement(1388514267) /rpt_family="Alu" complement(1440914787) /rpt_family="Alu" complement(1440914787) /rpt_family="Alu" /rpt_family="Alu" /rpt_family="Alu" /rpt_family="Alu" /rpt_family="Alu" /rpt_family="Alu" /rpt_family="Alu" /rpt_family="Alu"

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                         RESULT 13
AL591067
LOCUS
                                                                                                                                                                                    SOURCE
ORGANISM
                                                                                                                                                                                                                               ACCESSION
VERSION
                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                            Db 168136 ATGCTGAGTGGCTGTTTGGGG 168156
                                                                                                                                                                                                                 KEYWORDS
                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                 JOURNAL
                                                                                                                TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                       441 ATGCTGAGTGGCTGTTTGGGG 461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                      ocal Similarity
                                  Submitted (23-JAN-2002) Wellcome Trust Sanger Institute, Hinxton, Cambridgeshire, CBLO 15A, UK. E-mail enquiries: humquery@sanger.ac.uk Clone requests: clonerequest@sanger.ac.uk On Feb 1, 2002 this sequence version replaced gi:17426983.
                                                                                                                                                                                                                                                                                                                                                                                                                          21;
      Center: Wellcome Trust Sanger Institute Center code: SC
                                                                                                                                                                                                                                                   AL591067
231253 bp DNA linear HTG 30-JAN-2002 Mus musculus chromosome 11 clone RP23-333D2, *** SEQUENCING IN PROGRESS ***, in unordered pieces.
                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                        AL591067.24 GI:18476684
HTG; HTGS_PHASE1; HTGS_ACTIVEFIN; HTGS_DRAFT; HTGS_FULLTOP.
                                                                                                             Direct Submission
                                                                                                                           Martin, S
                                                                                                                                                                                   Mus musculus
                                                                                                                                                                                                  house mouse.
                                                                                                                                        (sites)
                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /rpt_tamily=",44234. .44544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /rpt_family="MLT1"
complement(39720.
/rpt_family="Alu"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /rpt_family="Alu" complement(39006. /rpt_family="Alu"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 complement (37010.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /rpt_family="Alu"
complement(34926.
/rpt_family="Alu"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              complement (36563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       38240. .38590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 complement(32989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rpt_family-"MER41"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /rpt_family-"Alu"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /rpt_family="LTR8" 32690)
                                                                                                                                                                                                                                                                                                                                                                                                                                   2.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      _family="Alu"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          family-"Alu"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  _family="Alu"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   _famil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     family-"L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              family-"Alu"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         family-"Alu"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      family-"Alu"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               family-"LTR8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .43919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .43168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .40360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ly="Alu"
                                                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 21; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .39317)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .36790)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .40012)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .37313)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .35159)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .33087)
                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                  0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 218892;
                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                  0
Ş
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 14
AX164150/c
                                                                                                                                                   ORIGIN
                                                                                                                                                                              BASE COUNT
                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Db 113305 ACCTGTCTGAGGCCCACCCTG 113325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BASE COUNT.
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     rocus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                           Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Lo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     502 ACCTGTCTGAGGCCCACCCTG 522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
les 21; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   synthetic construct.
synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 22 from Patent WO0140465. AX164150
                                                                                                                                                                                                                                                                                                                                                                          Genentech,
                                                                                                                                                                                                                                                                                                                                                                                                  Patent: WO 0140465-A 22 07-JUN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Fong.S., Goddard,A., Godowski,P.J., Grimaldi,C.J., Gurney,A.L., Hillan,K.J., Tumas,D., Watanabe,C.K., Wood,W.I. and Zhang,Z. Compositions and methods for the treatment of immune related
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   artificial sequence.

1 (bases 1 to 47)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AX164150.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AX164150
                                                                                                                                                                                                                                                                                                                                                                                                                                       diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Assembly program: XGAP4; version 4.5 Sequencing vector: plasmid; L08752; 100% of reads Chemistry: Dye-terminator Big Dye; 100% of reads Consensus quality: 230943 bases at least Q40 Consensus quality: 231085 bases at least Q30 Consensus quality: 231128 bases at least Q20
                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Insert size: 231153; sum-of-contigs
Insert size: 232554; 2.5% error; agarose-fp
Quality coverage: 11.17x in Q20 bases; sum-of-contigs Quality
coverage: 11.10x in Q20 bases; agarose-fp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Center project name: bM333D2
----- Summary Statistics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: humquery@sanger.ac.uk
Project Information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          55532 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  as soon as it is available and the accession number will be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NOTE: This is a 'working draft' sequence.
          Conservative
                                                                                                                                                                              16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2.8%; Score 21; llarity 100.0%; Pred. No. Conservative 0; Mismatcl
                                                                                                                                                          /organism="synthetic construct"
/db_xref="taxon:32630"
/note="Synthetic oligonucleotide probe"
/note="5"
/
                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="assembly_fragment:07956"
56202 c 57210 g 62209 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note="assembly_fragment:06314"
134313. .231253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Mus musculus"
/db_xref="taxon:10090"
/chromosome="11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1. .134212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 clone_lib-"RPCI-23"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  clone="RP23-333D2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    http://www.sanger.ac.uk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GI:14545091
100.0%; FJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .23125
                                    Score 20; DB 6; Length 47; Pred. No. 7.2;
          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        47 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 2;
1.8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100% of reads
          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 231253;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100 others
      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PAT 22-JUN-2001
   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

574 GAGATGCGTGTGCTGATGGG 593

밁

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 15
ATACOAC/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
exon
                                                           exon
                                                                                                                      exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TATA_signal mRNA
                             intron
                                                                                                                                                  intron
                                                                                      intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ohlrogge, J.B.

Ohlrogge, J.B.

Direct Submission

Submitted (25-OCT-1996) J.B. Ohlrogge, Michigan State University,

Dept. of Botany and Plant Pathology, East Lansing, MI 48824-1312,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bao, X., Shorrosh, B.S. and Ohlrogge, J.B. Isolation and characterization of an Arabidopsis biotin carboxylase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnollophyta; eudicotyledons; core eudicots; Rosidae; eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATACOAC
A:thaliana gene encoding acetyl-CoA carboxylase, biotin subunit.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gene and its promoter Plant Mol. Biol. 35 (5),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 thale cress.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               acetyl-CoA carboxylase; biotin carboxylase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Y09061
Y09061.1 GI:1865670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (bases 1 to 6605)
                                                                     /number=2
2761. .2837
/number=2
                            /number=3
2980. .31
                                                                                                                                                                                        /translation="MDASMITNSKSITSPPSLALGKSGGGGVIRSSLCNLMMPSKVNF
.PRQRTQTLKVSGVKLKRATSGGLGVTCSGGDKILVANRGEIAVVSTRTAHEMGIPCVA
VYSTIDKDALHVKLADEAVCIGEAPSNQSYLVIPNULSAAISRGCTMLHPGVGFLSEN
ALFVEMCRDHGINFIGPNDTIRVMGDKATARETMKNAGVPTVPGSDGLLQSTEEAVR
VANEIGFDVMITATAGGGGRGWRLAKEPGEFVKLLQQAKSEAAAAFGKNGCYLLEKFVQ
NPRHIEFQVLADKFGNVVHFGERDCSIQRRNWKLLEEPSPALTAELRKAMGDAAVAA
ASIGYIGVGTVEFLLDXRGSFTFMEMNTRIQVEHPVTEMIYSVDLIEEGIRVAMGEKL
RKQEDIVLRGHSIECRINADDPFKGFRGFBGFRTTSYLPSGGFFVRNDSHVYSDYVVP
                                                           2838. .2979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  join(2078.
                                                                                                                                                                TAFIVKHEEELAELVGYEAFGKAEHRDRRIA"
                                                                                                                                                                             PSYDSLLGKLIVWAPTREKAIERMKRALNDTIITGVPTTINYHKLILDVEDFKNGKVD
                                                                                                                                                                                                                                                                                                                               /protein_id="CAA70282.1"
/db_xref="GI:1865671"
           'number=
                                                                                                                                  number-
                                                                                                                                                                                                                                                                                                                   'db_xref="SPTREMBL:P93650"
                                                                                                                                                                                                                                                                                                                                                                           /product="acetyl-CoA carboxylase, biotin carboxylase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Arabidopsis thaliana"
/strain="ecotype Columbia"
/db_xref="taxon:3702"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                         n(2272. .2319,2417. .2760,2838. .2979,3119. .3217,
9. .3365,3569. .3640,4007. .4096,4232. .4291,4597.
4. .4956,5035. .5116,5205. .5311,5527. .5602,5757.
2. .5954,0027. .6083)
_number="6.4.1.2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (2078. 2319,2417. 2760,2838. 2979,3119. 3217, 3365,3569. 3640,4007. 4096,4232. 4291,4597. 4956,5035. 5116,5205. 5511,5527. 5602,5757. 5954,6027. 6083)
                                                                                                                    . 2760
                             .3118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           539-550 (1997)
                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                               Search completed: November Job time: 3212 secs
                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                               polyA_signal
BASE COUNT 2106
                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                           exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      exon
                                                                                                                                                                                                                                                                                                                                                                                                         intron
                                                                                                                                                                                                                                                                                                                                                                                                                                         exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   intron
                                                                                                                                                                                                         743 AATAAATTTATGTACTTTAT 762
                                                                                                                                                                                         228 AATAAATTTATGTACTTTAT 209
                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                          /number=15
6027: .6083
                                                                                                                                                                                                                                                                                                                                             6492.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /number=13
5757. .5803
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /number=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /number=13
5603. .575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /number=9
                                                                                                                                                                                                                                                                                                                                                                                                                                       /number=14
5892. .595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /number=4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5804. .589.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /number=10
5035. .511
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /number-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /number=5
3569. ..36
                                                                                                                                                                                                                                                                                                                                                          /number-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          number=12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3641
                                                                                                                                                                                                                                                                                                                                                                                                                    number-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   'number=14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'number=12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    number-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  number-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1864. .4956
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            number=9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'number=8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'number=8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                'number=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              number-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'number-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        366. .3568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'number=5
                                                                                                                                                                                                                                                                                                                                 1068
                                                                                                                                                                                                                                                                   2.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .4779
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .4006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .4863
                                                                                                                                                                                                                                                                                                                               ဂ
                                                                                                                                               2002, 02:56:39
                                                                                                                                                                                                                                                                                                                          1197 g
                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                   Score 20;
Pred. No.
                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                               2201
                                                                                                                                                                                                                                                                   7;
                                                                                                                                                                                                                                                                                                                              4
                                                                                                                                                                                                                                                                                 8;
                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                 Length 6605;
                                                                                                                                                                                                                                                                                                                              \frac{\omega}{\omega}
                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                              others
```

0,

Gaps

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OM nucleic - nucleic search, using sw model
                                                                      Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
           Query
Score Match Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GenEmbl:*
1: gb_ba:*
2: gb_htg:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IDENTITY_NUC Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1797656 seqs, 10463268293 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         November 2, 2002, 23:03:22; Search time 1822 Seconds (without alignments) 8763.418 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-092-297-5
763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 CTCCACTGCAACCACCCAGA.....ATAAATTTATGTACTTTATA 763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GenCore version 5.1.3
Copyright (c) 1993 - 2002 Compugen Ltd.
                                                                                                                          em_htg_hum:*
em_htg_inv:*
em_htg_other:*
em_htgo_inv:*
                                                                                                                                                                                                                                                                                                                                                                              gb_pr:*
gb_ro:*
gb_sts:*
gb_sy:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gb_ba:*
gb_htg:*
gb_in:*
                                                                                                                                                                                                                                                                       em_on:*
                                                                                                                                                                                                                                                                                                                                                                                                                                          gb_pat:*
                                                                                                                                                                                                              em_ro:*
                                                                                                                                                                                                                                                                                                          em_in:*
                                                                                                                                                                                                                                                                                                                     em_hum:
                                                                                                                                                                                                                                                                                                                                  em_fun:
                                                                                                                                                                                                                                                                                                                                               em_ba:*
                   Ħ
                                                     SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3595312
Description
                                                                                                                                                                  RESULT 1
AX164131
LOCUS
DEFINITIO
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANIS
                                                                                                                    REF
A
                                               FEA
                                                                                                                                                                                                                                                                                                                                                                                               0 0
                                                                                                                                                                                                                                                                                                                                                                                                                                 O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                00000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 O
```

440 442 443 45	33333333333333333333333333333333333333	222222222200 22222200 24232200	10 11 11 11 11 11 11 11 11 11 11 11 11 1
	000000	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	760.61 140.6 90.6 90.6 88.8 88.8 88.8 40.8 40.8
8 15089 8 16759 8 18506 8 18871 8 21156 8 24883	8 1027. 8 1027. 8 1373. 8 1667. 8 1751. 8 1736. 8 1736. 8 1767. 8 1767. 8 1700.	2 1381 2 1389 1 2391 0 2071 0 2077 0 2372 9 1582 9 1582 158	
2265651	110000000		ο η φυνηνηνο φορο ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο
06909 01863 08469 09332 09215	**************		(1641 (00441 (0071 (0071 (00554 (055
1988 Homo sap 1988 Homo sap 1989 Homo sap 1989 Homo sap 1989 Homo sap 1989 Homo sap 1989 Homo sap 1989 Homo sap	Fiv43943 Mus musc CO15074 Mus musc 031595 Human DNA 003622 Oryza sat 109803 Homo sapi 018670 Homo sapi 034693 Homo sapi 034553 Homo sapi 03556 Homo sapi	429315 Hon 009718 Mus 01971869 Hon 015869 Hon 094982 Ratt 077269 Des 072555 Hon 099543 Hon 106422 Ratt 106422 Hon 107622 Hon 107623 Mu	164131 Seq 114140 Seq 106262 Hom 107193 Hom 155696 Seq 107785 Hom 107785 Hom 107785 Hom 121632 Mus 16477 Hom 121632 Mus 18477 Hom 11500 Hom

## ALIGNMENTS

BASE COUNT	FEATURES source	TITLE	REFERENCE AUTHORS	KEYWORDS SOURCE ORGANISM	LOCUS DEFINITION ACCESSION
/organism="Homo sapiens" /db_xref="taxon:9606" 169 a 231 c 195 g 176 t	Genentech Inc. (US)  Location/Qualifiers  1771	Hillan, K.J., Tumas, D., Watanabe, C.K., Wood, W.I. and Zhang, Z. Compositions and methods for the treatment of immune related diseases	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.  1 (bases 1 to 771)  Fong, S., Goddard, A., Godowski, P.J., Grimaldi, C.J., Gurnev, A.L.,	AALD4131.1 GI:14545080 human HOmo sapiens	AX164131 771 bp DNA linear PAT 22-JUN-2001 Sequence 3 from Patent WO0140465. AX164131

... 1. 10 ... 158.4

```
δ
                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                          맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     β Q
                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                   VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                     RESULT 2
AX014140
                                                                                                                            δ
                                                                                                                                             밁
                                                                                                                                                        Ş
                                                                                                                                                                         멂
                                                                                                                                                                                   δõ
                                                                                                                                                                                                     밁
                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                         õ
                                                                                                                                                                                                                                                                                                                        밁
       REFERENCE
AUTHORS
                                                                LOCUS
DEFINITION
ACCESSION
                                                                                                                   문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 761; Conserv
                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                 481
                                                                                                                                                                                                                                                                421
                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                   721
                                                                                                                                721
                                                                                                                                              661
                                                                                                                                                            661
                                                                                                                                                                          109
                                                                                                                                                                                        601
                                                                                                                                                                                                       541
                                                                                                                                                                                                                     541
                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTCCACTGCAACCACCCAGAGCCATGGCTCCCCGAGGCTGCATCGTAGCTGTCTTTGCCA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                          ACTGTTGCTATGATGATGCCGTGCCGTGCCCTTGGCCAGGACCCAGACGTGTGGAAACTGCA
                                                                                                                                                                                                                                                                                                                                                                                                            ACCTGATGCTGTGCCAGCCACACAAGAGATGTGGGGACAAGTTCTACGACCCCCTGCAGC
                                                                                                                                                                                                                                                               CCTTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCTGATAAACC
                                                                                                                 CAGGAGCAAAGCACAGGATCATAATAAATTTATGTACTTTATA 763
                                                                                                                                             CCACAGGTCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTGCTGATGGGGGCCCAG
                                                                                                                                                                                                                                   AACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCGCTGCCCTGAGGAGGC
                                                                                                                                                                                                                                                                                                    AGAACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGCTAATGGA
                                                                                                                                                                                                                                                                                                                                                     CCTTCAGAGTCTGCCTGTAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCTGATAAACC
                                                                                                                                                                                                                                                                                             Homo sapiens
Eukaryota; Metazoa; Choi
Mammalia; Eutheria; Prin
1 (bases 1 to 762)
Schmitt,A., Specht,T., I
Pilarsky,C.
                                                         Sequence 3
AX014140
AX014140.1
                                            human.
                                                                               AX014140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                        from
                                                          GI:10040587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99.7%;
                                                                        762 bp
Patent W09954447.
                      Chordata;
Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 761; DB 6; Pred. No. 1.2e-197; 1; Mismatches 1;
        Dahl,
        Ë
                      Craniata; Vertebrata; Catarrhini; Hominidae;
                                                                                DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
         `
B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                linear
         Rosenthal, A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    771;
                               Euteleostomi;
                                                                                PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                 07-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                 480
                                                                                                                                                                                                                                                                                480
                                                                                                                                                                                                                                                                                              420
                                                                                                                                                                                                                                                                                                           420
                                                                                                                                                                                                                                                                                                                           360
                                                                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                                                                                     300
                                                                                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                     540
                                                                                                                                                                                                                                                   540
                                                                                                                                                              720
                                                                                                                                                                             660
                                                                                                                                                                                          660
                                                                                                                                                                                                        600
                                                                                                                                                                                                                       600
                                                                                                                                                720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

```
BASE COUNT
ORIGIN
RESULT 3
AC006262
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                 80
                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                               QY
                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                          Ωy
                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                    밁
                                                                                         δÃ
                                                                                                                         õ
                                                                                                                                         밁
                                                                                                                                                       δã
                                                                                                                                                                        밁
                                                                                                                                                                                     δõ
                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                    밁
                                                           Š
                                                                           В
                                                                                                           밁
                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                        481
                                                                                                                                                                                                       421
                                                                                                                                                                                                                      421
                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                           601
                                                                                                                                          541
                                                                                                                                                         541
                                                                                                                                                                        481
                                                                             661
                                                                                                            601
                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                61
                                               721
                                                             721
                                                                                                                                                                                                                                                                                                                                                                                                                               CTCCACTGCAACCACCCAGAGCCATGGCTCCCCGAGGCTGCATCGTAGCTGTCTTTGCCA
                                                                                                                                                                                                                                     ACATCAGGGGAACGATĠACTCCTGGATTCTCCTTGCTGGGTGGGCCTGGAGAAAGAGGCT
                                                                                                                                                                                                                                                                    AGAACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGCTAATGGA
                                                                                                                                                                                                                                                                                                   ACTGTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCAGACGTGTGGAAACTGCA
                                                                                                                                                                                                                                                                                                                                                                 TTTTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCATGACTCCTT 120
                                                                                                                                         CCACAGGTCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTGCTGATGGGGGCCCAG
                                                                                                                                                                                                      GGACTCTGAACCCTCCTGATGACCCCTATGGCCAACATCAACCCGGCACCACCCCAAGGC
                                                                                                                                                                        AACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCGCTGCCCTGAGGAGGC
                                                                                                                                                                               AACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCGCTGCCCTGAGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human nucleic acid sequences of bladder Patent: WO 9954447-A 3 28-OCT-1999; SCHMITT ARMIN (DE); SPECHT THOMAS (DE); BERND (DE); ROSENTHAL ANDRE (DE); METAGE (DE); PILARSKY CHRISTIAN (DE) Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      162
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Homo sapiens"
/db_xref="taxon:9606"
232 c 194 g 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 760.6; 1
Pred. No. 1.6e
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ۲:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       174
                                                                                                                                                                                                                                                                                                                                                                                                                                                               5; DB 6;
1.6e-197;
nes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (DE); DAHL EDGAR (DE); HINZMANI
METAGEN GES FUER GENOMFORSCHUN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             tumour tiss
                                                 761
                                                               761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                  60
                                                                                                                                                                                                                                                                                                                                                                                                                                                 60
                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                         480
                                                                                                              660
                                                                                                                            660
                                                                                                                                             600
                                                                                                                                                            600
                                                                                                                                                                          540
                                                                                                                                                                                         540
                                                                                                                                                                                                          480
                                                                                                                                                                                                                                         420
                                                                                                                                                                                                                                                        420
                                                                                                                                                                                                                                                                         360
                                                                                                                                                                                                                                                                                       360
                                                                                                                                                                                                                                                                                                      300
                                                                                                                                                                                                                                                                                                                      300
                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                     240
                                                                                              720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0,
```

Homo

sapiens

107573 le 19, E BAC BAC

DNA linear PRI BC264576 (CTC-297N14), c

AC006262

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /ERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                          repeat_region
                                                                    repeat_region
                                                                                                            repeat_region
                                                                                                                                                                                                        repeat_region
                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Liu,S., Attix,C., Andreise,T., Trankheim,M., Amico-Keller,G., Coefield,J., Duarte,S., Lucas,S., Bruce,R., Thomas,P., Quan,G., Kronmiller,B., Arellano,A., Sanders,C., Ow,D., Nolan,M., Trong,S. Kobayashi,A., Olsen,A.S. and Carrano,A.V. Sequence analysis of a 1.9 Mb region in 19q13.2 between APOE and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (21-SEP-2001) Joint Genome Institute, Lawrence Livermore Submitted (21-SEP-2001) Joint Genome Institute, Lawrence Livermore A94551, USA National Laboratory, 7000 East Ave., Livermore, CA 94551, USA National Laboratory, 7000 East Ave., Livermore, CA 94551, USA National Laboratory, 1050 App and sequence oriented from centromere to q telomere. BC264576 Map and sequence oriented from centromere to q telomere. BC264576 CTB-139A16, to 20,296 of this accession, and overlaps BC962621 (CTB-139A16, to 20,296 of this accession, and overlaps BC962621 (CTB-139A16, to 20,296 of this accession, and overlaps BC9636261 (CTB-139A16, to 20,296 of this accession, and overlaps BC96361, and this sequence does not represent the entire insert of accession. This sequence does not represent the entire insert of BC264576. Additional chromosome 19 map and sequence information may be obtained at: http://www-bio.llnl.gov/bbrp/genome/genome.html.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Lamerdin, J.E., McCready, P.M., Skowronski, E., Viswanathan, V., Burkhart-Schultz, K., Gordon, L., Dias, J., Ramirez, M., Stilwagen, S. Phan, H., Velasco, N., Do, L., Regala, W., Terry, A., Garnes, J., Danganan, L., Erler, A., Christensen, M., Georgescu, A., Avila, J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AC006262.2 GI:15718550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Submitted (30-DEC-1998) Joint Genome Institute, Lawrence Livermore National Laboratory, 7000 East Ave., Livermore, CA 94551, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           National Laboratory, 703 (bases 1 to 107573)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Jnpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Lamerdin, J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      _amerdin,J.E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (bases 1 to 106320)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (bases 1 to 107573)
                                                                                                                                          /rpt_family="LIMA7"
complement(2730. .3137)
/rpt_family="LIMA7"
                                                                                                                                                                                                                                                                                                                                                                                                           complement(669. .800)
/rpt_family="(GA)n"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="DDS similarity to AA456254 zx99d06.rl Soares
NhHMPuS1 Homo sapiens cDNA clone 811883 5'; (3. .215); 100%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                              complement(1035.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 from Research Genetics
                                                                                                                                                                                                                                                                                                 complement (2014.
                                                                                                                                                                                                                                                                                                                                                                                        complement(829.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note="LLNL clone name: BC264576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /clone="CTC-297N14"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             map="19q13.2 between APOE and D19S412"
complement(3805...4108)
/rpt_family="AluJo"
                                                                                                                                                                                                                               /rpt
                                                                                                                                                                                                                                                                            /rpt.
                                                                                                                                                                                                                                                                                               /rpt_family="L1MB7"
complement/?^.'
                                                                                                                                                                                                                                                                                                                                                                /rpt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     'cell_line="978SK"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'chromosome="
                                            complement(3448..3803)
/rpt_family="L1MB7"
                                                                                                                                                                                                                                                  family="L1MA7"
lement(2206
                                                                                                                                        _famil
                                                                                                                                                                                                                                 _family="AluJo"
                                                                                                                                                                                                                                                                                                                                                                          family="
                                                                                           family-"AluJb"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                type="fibroblast"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chordata; Craniata; Vertebrata; Euteleostomi; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                     ly-"L1MB7"
                                                                                                                                                                                                                                                                                                                                                                   (GGGA)n'
                                                                                                                                                                                                                                                                                                                                                                                                 .953)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BAC library obtained
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Trong, S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          misc_feature
                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                        misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                            repeat_region
                                               repeat_region
                                                                                              repeat_region
                                                                                                                                        repeat_region
                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note-"DDS similarity to overlapping ESTs:
/note-"DDS similarity to overlapping ESTs:
/10144. 12398) AA456254 zx99d06.rl Soares NhHMPuSl Homo
(12144. 12398) AA456254 zx99d06.rl Soares NhHMPuSl Homo
sapiens cDNA clone 811883 5', (270. 523); 99%
sapiens cDNA clone 1061371 ox76910.xl
identity-(12182. 1241) AA654642
(454. 125); 100% identity-(12173. 1141) AA454642
(454. 125); 100% identity-(12173. 1241) AA454642
(454. 125); 100% identity-(12174. 1241) AA760247
3'; (455. 1217); 100% identity-(12144. 1241) AA760247
3'; (455. 1217); 100% identity-(12144. 1241) AA760247
3'; (455. 1217); 100% identity-(12144. 1241) AA760247
ovy1406.rl Stratagene mouse skin (#937313) Mus musculus
cDNA clone 1228162 5'; (119. 380); 69% identity."
complement(12536. 12614)
complement(12536. 12614)
/note-"predicted exon, program: grail2exons_human_1.3,
frame: 2, quality: excellent, score: 90.000"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /rpt_family="LlM1"
complement/family="LlM1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      complement(4826.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /rpt_family="LIMB7"
complement/in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             complement(5974
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /rpt_family="L1PA8"
complement/family="L1PA8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     complement(10866...10964)
/note-"predicted exon, program: grail2exons_human_1.3,
frame: 1, quality: excellent, score: 75.000"
11326...11517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      complement (9736.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               complement(7661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         complement (7527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /rpt_family="AT_rich"
complement(7150)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="DDS similarity to AA456254 zx99d06.r1 Soares NhHMPuS1 Homo sapiens cDNA clone 811883 5/; (216. .269); 100% identity."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /rpt_family="FLAM_C"
complement(7661. .7916)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /rpt_family_"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rpt_family="Alux"
                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note-"DDS similarity to overlapping ESTs:
//note-"DDS similarity to overlapping ESTs:
(12603. .12818) AA454642 zx99d06.sl Soares NhHMPuSl Homo
fleetity.~(12600. .12823) AIO81371 ox76g10.xl
identity.~(12600. .12823) AIO81371 ox76g10.xl
soares_NhHMPu_Sl Homo sapiens cDNA clone IMAGE:1662306 3';
soares_NhHMPu_Sl Homo sapiens cDNA clone IMAGE:1662306 3';
(224. .1); 98% identity.~(12600. .12656) AA760247 vv74e06.rl
(224. .1); 98% identity.~(12600. .12656) AA760247 vv74e06.rl
stratagene mouse skin (#937313) Mus musculus cDNA clone
1228162 5'; (381. .432); 76% identity."
                                                                                                                                                                                                                                                                                               complement(14029. .14445)

note="predicted exon, program:
frame: 0 quality: good, score:
complement(17695. .18620)

rpt_family="MERIB"

rpt_family="MERIB"
                                                                                                                                                                                                                             /rpt_family="MER11A"
19151. .19519
                                                                                                                                                             complement(19592...19754)
/rpt_family="AluJo"
                                                                                                                                                                                                                                                                                                                                                                                                                                       complement (12967
                                                                                                                                             complement(19767.
                                                                                                                     /rpt_family="MER65A"
                                                                                                                                                                                                                 rpt_family-"MLT1B"
                                rpt_family-"AluJo"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           _family="L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          _family="L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      _family="
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          _family="AluJo"
.5. .11998
                                                                                                                                                                                                                                                                                                                                                                                                    _family="L1P5"
                                                      _family="(CA)n"
6. .20751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "(TA)n"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .7646)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .10038)
                                                                                                                                                 .19870)
                                                                                                                                                                                                                                                                                                                                                              grail2exons_human_1.3,
58.000"
```

```
82528 AGCTGCCCTGAGGAGGCCCACAGGTCCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTG
                                                                                                                                                                                                                            Best Local Similarity Matches 418; Conserv
                                                                                                                                                    82408
                           524 CGCTGCCCTGAGGAGGCCCACAGGTCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTG 583
                                                                        464 CAGAGAAACACACACTCAACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGC 523
                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                            CCCTGGAGAAAAGAGGCTGGTGTTACCTGAGATCTGGGATGCTGAGTGGCTGTTTGGGGGC 463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                         GCCTGGAGAAAGAGGCTGGTTACCTGAGATCTGGGATGCTGAGTGGCTGTTTGGGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                 7rpt_
                                                                                                                                                                                                                                                                                              /rpt_family="AluSg"
complement(32050, 32614,
/rpt_family="AluSg"
                                                                                                                                                                                                                                                               /rpt_family-"LTR8"
                                                                                                                                                                                                                                                                                                                        /rpt_family="Alusg"
complement(31707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /rpt_family="Alusx"
complement(27374. .27682)
/rpt_family="Alusg"
27743 ...28177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         complement(23090, .23194)
/hote="predicted exon, program: gr
frame: 2, quality: good, score: 50
/rpt_family="FLAN_A"
complement(24028, .24429)
/rpt_family="Alulb"
/rpt_family="Alulb"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note="predicted exon,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      complement(27078.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Complement(26586. .26613)
/rpt_family="AT_rich"
complement(26677. .26941)
                                                                                                                                                                                                           54.8%; Score 418; DB 9; 1
99.5%; Pred. No. 9.5e-104;
tive 1; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        complement(24910
                                                                                                                                                                                                                                                                                _family="MLT2D"
9. .32601
                                                                                                                                                                                                                                                                                                                                                 family="(GA)n"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rpt_family-"MERIIA"
                                                                                                                                                                                                                                                                                                                                                                                                       _family="MER4D"
                                                                                                                                                                                                                                                                                                                                                                                                                            _family_"Alusg"
                                                                                                                                                                                                                                                                                                                                                                                 family-"MER4D"
                                                                                                                                                                                                                                                                                                                                                                                                                                                         _famj
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            family-"(TA)n"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -family-"Alusx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         family-"L1M1/2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             _family="MIR" .26941)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   _family="HERVL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2, quality: good,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              family-"MER45"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     _family="MSTB"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              _family="Alusx"
8. .22798
                                                                                                                                                                                                                                                                                                                                                                                                                                                     LLY="MER4D"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 program:
                                                                                                                                                                                                                            Length 107573;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     grail2exons_human_1.3,
50.000"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         grail2exons_human_1.3,
50.000*
                                                              82527
                                                                                                          82467
                                                                                                                                                                                                   0
repeat_region
```

\$ \$ \$ \$

TPt\_family="L1MB4"

```
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 4
AC007193/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                          repeat_region
                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DЪ
                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Snoon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                     repeat_region
                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20
                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      82708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              82588 TGCTGATGGGGGCCCAGGGACTCTGAACCCCTCGATGACCCCCTATGGCCAACATCAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   82648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

I (bases 1 to 146180)

Lamerdin, J.E., McCready, P.M., Skowronski, E., Viswanathan, V., Stilwagen, S., Phan, H., Velasco, N., Do, L., Regala, W., Terry, A., Avila, J., Liu, S., Attix, C., Andreise, T., Trankheim, M., Georgescu, A., Amico-keller, G., Coefield, J., Duarte, S., Lucas, S., Bruce, R., Nolan, M., Trong, S., Kobayashi, A., Olsen, A., Sanders, C., Ow, D., Sequence analysis of a 1.9 Mb region in 19q13.2 between APOE and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           704 TCAAGTTCTCTTCTATCCAGGAGCAAAGCACAGGATCATAATAAATTTATGTACTTTATA 763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              584 TGCTGATGGGGGCCCAGGGACTCTGAACCCTCCTGATGACCCSTATGGCCAACATCAACC
                                                                                                                                                                                                                                                                                                                         Submitted (02-APR-1999) Joint Genome Institute, Lawrence Livermore National Laboratory, 7000 East Ave., Livermore, CA 94551, USA Map and sequence oriented from q centromere to telomere. BAC 82621 (CIT-B-139al8) overlaps BAC 264576 (CIT-B-297n14) to the left from bases 1 to 27,487 of this accession, and separated from BAC 89981 (CIT-B-158d10) on the right by a gap of approximately 17 to 23 kb. Additional chromosome 19 map and sequence information may be obtained at: http://www-bio.llnl.gov/bbrp/genome/genome.html.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCAAGTTCTCTTCTATCCAGGAGCAAAGCACAGGATCATAATTAAAATTTATGTACTTTATA 82767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Jamerdin, J.E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo Sapiens chromosome 19, BAC 82621 (AC007193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AC007193.1 GI:4558635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AC007193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (bases 1 to 146180)
                /rpt_family="L1"
complement(1857.
rpt_family="Alusx"
                                                                                             rpt_family-"L1"
                                                                                                                              "L1"-L1 "
                                                                                                                                                                                      /cell_type="fibroblast"
/note="LLNL clone name:
Research Genetics."
                                                                                                                                                                                                                                                          /map="19913.2 between APOE and D19S412"
                                                                                                                                                                                                                                          cell_line="987SK"
                                                                                                                                                                                                                                                                                                  /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                   rpt_family="L1"
11. .677
                                                                                                                                                                                                                                                                                            chromosome-"
                                                                                                                                                                                 BC82621 BAC library obtained from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A linear pr
(CIT-B-139al8),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRI 17-JUN-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  82707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               82647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             643
```

```
misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                        repeat_region
                                                                                                                                                                repeat_region
                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                              repeat_region
                                                                                           repeat_region
                                                                                                                  repeat_region
                                             repeat_region
                                                                   repeat_region
                       repeat_region
repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          complement (2629.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2478. .2549
/rpt_family="LINE2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="predicted exon, program: grail2exons_human_1.3,
frame: 2, quality: excellent, score: 81.000"
complement(5169..5468)
/rpt_family="AluY"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             complement(8575. .8597)
/rpt_family="AT_rich"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   complement(8598.
           complement(11536...11661)
/rpt_family="FLAM_C"
                                                                                                                                                                                                                                                                                                                                                                                  complement(10999.
                                                                                                                                                                             complement(12806 ..13106)
/rpt_family="Alusx"
                                                                      /rpt_family="L1MC/D" complement(14115. .14
                                                                                                        complement(13709. .14037)
/rpt_family="L1"
                                                                                                                                             complement(13482.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               rpt_family-"Alusx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  t_family="Alusx"
plement(4269...4568)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  __family="AluJo"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     _family="AluSq"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     _family="AluSx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    _family="(TA)n"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             _family="Alu"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                family-"L1"
                                                                                                                                                                                                                                                            __family="AluSg"
lement(12150
                                                                                                                                                                                                                                                                                   family="LIMC/D" lement(11833
                                                                                                                                                                                          _family="L1MC/D"
lement(1700)
                                                                                                                                                                                                                                       _family="L1MC/D"
9, .1264"
                                                                                                                                                                                                                                                                                                                                              lement(11302. .11517)
_family="L1MC/D"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         family-"AluSx"
                                                                                                                                                                                                                                                                                                                                                           family="AluJo"
ement(11770"
                                                                                                                                                                                                                                                                                                                                                                                                                                            family="AluSq"
                                                                                                                                          family="(GAAA)n"
ement(1348)
                                                                                                                                                                                                                                                                                                                                                                                                family-"AluJb"
                                                                                                                                                                                                                                                                                                                                                                                                                    family-"FLAM"
                                                 _family="Aluy"
ement'1''
                                                                                                                     family="AluJb"
ement(12700
                                                                                                                                                                                                                                family-"FRAM"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .7595
  family="AluSx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  predicted exon, program: grail2exons_human_1.3,
0, quality: good, score: 52.000"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 y-"AluJb"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .8878)
                                                                                                .14105)
         Query Match
Best Local Similarity
Matches 202; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                               misc_feature
                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                   repeat_region
                                                                                             repeat_region
                                                                                                                                           repeat_region
                                                                     repeat_region
            18.4%;
illarity 78.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /rpt_family="AluSg"
complement(16691 ..17060)
/rpt_family="THE1C"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /rpt_family="AluJo"
complement(16257. .16340)
/note="predicted exon, program: grail2exons_human_1.3,
/note="predicted exon, program: 63.000"
frame: 0, quality: good, score: 63.000"
                                                                                                                                                                                                                                                                                                                                                                                    /rpt_family="(TAA)n"
complement(26257...26545)
/rpt_famil":"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       complement(23651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /rpt_family="HERVH"
complement/1010/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              complement (24403.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /rpt_family="HERVH"
complement(10/1'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             complement(18401. .18817)
                                                                                                                                                                                                               /rpt_family="AluSc"
complement(28733. .28877)
/rpt_familv="""
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      'rpt_family="HERVH"
omplement'?26"
                                                                                                                                                                                                                                                                                                                                 complement(27125...27422)
/rpt_family="Alusx"
                                                                                                                               frame: 2, quality: good, complement(29585. 29888)
/rpt_family="AluSg"
                                                                                                                                                                                                                                                          complement(28359. .28522)
/rpt_family="Alusg"
                                                         /rpt_family="AluJb"
complement(30830...
/rpt_family="MIR"
                                                                                                                                                                                                                                                                                                                                                             rpt_family="AluJo"
                                                                                                                                                                      9463. .29583
note="predicted exon, program:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  _family="AluJo"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           family="(GAAA)n"
                                                                                                                                                                                                      t_family="AluJb"
74. .29081
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           family*"MER74"
), ,25090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        _family="AluSq"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   _family="LTR7"
ement/7:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             family="HERVH"
ement(2002)
                                                                                                                                                                                                                                                                                                                                                                         _family="AluJo"
3, .26876
                                                                                                                                                                                                                                                                                                                                                                                                                                  _family="AluSg/x"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              family-"AluSx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               family-"AluJb"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      family-"L1MD3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                        family-"Alusp"
                                                                                                                                                                                                                                                                                                               _fami
                                                                                                                                                                                           _family-"AluJo"
                                                                                                                                                                                                                                                                                         family-"AluJ/FLAM"
                                                                                                            family-"AluSq"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17870
                                                                                                                                                                                                                                                                                                                .ly="AluSx"
              score 140.6; DB 9;
pred. No. 9.3e-28;
0; Mismatches 39;
                                                                          .31040)
                                                                                                                                                            score:
                                                                                                                                                            grail2exons_human_1.3,
71.000"
                                        Length 146180;
                    Indels
                    18;
                      Gaps
```

DNA

linear

PAT 13-JAN-2001

```
BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 61.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                  Matches 163;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 5
AX055440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                             261 TIGAGCTCTGCTGTCCCGAGTCTTT
                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                            19 GAGCCATGGCTCCCCGAGGCTGCATCGTAGCTGTCTTTGCCATTTTCTGCATCTCCAGGC 78
                                                              CCATCTTATCCTTAAAGGAGACCCGCCGCTGTGGCTCCACCTGCACCTTCTGGCCCTGCT
                                             TTGAGCAGTGCTGCCCCTGGACCTT 280
                                                                              CCGTCGTGCCCTTGGCCAGGACCCAGACGTGTGG---AAACTGCACCTTCAGAGTCTGCT 255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5665 GTGACAGGCTTTCTCGTAG 5647
                                                                                                                CGACACCCAGGTGTGGGAACAAGATCTACAACCCTTCAGAGCAGTGCTGTTATGATGATG
                                                                                                                              CACACAAGAGATGTGGGGACAAGTTCTACGACCCCCTGCAGCACTGTTGCTATGATGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5725 CCCAGGCGTCCCTCATGGTGAAGACGAAAGGCCAGAAGTGCTCCTCAGCCCTGACCTCGG 5666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5784 AAGTGTGGAAACTGCACCTTCAGTGTC-GCTTCGAGCAGTGCTGCCCCGGTCCCTCAGCT 5726
                                                                                                                                                                TCCAGTGTTCAAAAGGAACTACAGACGCTCCTGTTGGCTCAGGACTGTGGCTGTGCCAGC 140
                                                                                                                                                                                   TCCTCTGCTCACACGGAGCCCCAGTGGCCCCCATGACTCCTTACCTGATGCTGTGCCAGC 138
                                                                                                                                                                                                                   GAAGCATGAGGCCACGATGCTGGATCTTGGCTCTTGTCTGGATAACAGTCTTCCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5844 TÁCGACCCCTTGCGGCÁCTGTTGCTATGÁCAGTGCTGTGGTGCCCTTGGGGCÁGGÁCCCAG 5785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             275 -----GACCTTCATGGTGAAGCTGATAAACCAGAACTGCGACTCAGCCCGGACCTCGG 327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5904 GGCCCCATAAGTGCTTACCTCATGCTCTGCCAGCGGCATTTGGGAAGTGGGGACAAGCTC 5845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      105 GCCCCCATGACTCCTTACCTGATGCTGTGCCAGCCACACAAGAGATGTGGGGACAAGTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATGACAGGCTTTGTCGCAG 346
                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 (bases 1 to 662)
Ashkenazi,A.J., Baker,K.P., Chan,B., Goddard,A., Godowski,P.J.,
Gurney,A.L., Hebert,C., Henzel,W., Kabakoff,R.C., Shelton,D.L.,
Tumas,D., Watanabe,C.K. and Wood,W.I.
                                                                                                                                                                                                                                                                                                                                                                                                                            Genentech,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
AX055440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TACGACCCCTGCAGCACTGTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCAG 224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AX055440.1 GI:12228712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AX055440
                                                                                                                                                                                                                                                                                                                                                                152 a
                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                  WO 0073452-A 70 07-DEC-2000;
ch, Inc. (US)
                                                                                                                                                                                                                                                                                                                                                /organism="Homo sapiens"
/db_xref="taxon:9606"
187 c 167 g 15
                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
1. .662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     70 from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Patent
                                                                                                                                                                                                                                                                                          ö
                             285
                                                                                                                                                                                                                                                                                            Score 90.6; DB 6;
Pred. No. 5.6e-14;
                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                          for the treatment of immune related
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                W00073452.
                                                                                                                                                                                                                                                                                                                                                  156 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA
                                                                                                                                                                                                                                                                                                    Length 662;
                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PAT 13-JAN-2001
                                                                260
                                                                                                                                           198
                                                                                                                                                                                                                                                                     1;
                                                                                                   REFERENCE
AUTHORS
TITLE
                                                              FEATURES
                                                                                                                                                                 SOURCE
ORGANISM
                                                                                                                                                                                                                                                         RESULT 7
AX118905
                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                         ACCESSION
VERSION
                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                  Вþ
                                                                                                                                                                                                                                                 FOCOS
                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                         δð
                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
ORIGIN
             Sg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCUS
DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 163;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AX055696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                261 TTGAGCTCTGCTGTCCCGAGTCTTT
                                                                                                                                                                                                                                                                                                                      256 TTGAGCAGTGCTGCCCTGGACCTT 280
                                                                                                                                                                                                                                                                                                                                 201 CCATCTTATCCTTAAAGGAGACCCGCCGCTGTGGCTCCACCTTGCACCTTCTGGCCCTGCT
                                                                                                                                                                                                                                                                                                                                                                                   141 CGACACCCAGGTGTGGGAACAAGATCTACAACCCTTCAGAGCAGTGCTGTTATGATGATG
                                                                                                                                                                                                                                                                                                                                                                                                   81 TCCAGTGTTCAAAAGGAACTACAGACGCTCCTGTTGGCTCAGGACTGTGGCTGTGCCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                   79 TCCTCTGCTCACACGGAGCCCCAGTGGCCCCCATGACTCCTTACCTGATGCTGTGCCAGC 138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21 GAAGCATGAGGCCACGATGCTGCATCTTGGCTCTTGTCTGCTGGATAACAGTCTTCCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19 GAGCCATGGCTCCCCGAGGCTGCATCGTAGCTGTCTTTGCCATTTTCTGCATCTCCAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Loca1
                                                                                                                                                                                                                                                                                                                                                     CCGTCGTGCCCTTGGCCAGGACCCAGACGTGTGG---AAACTGCACCTTCAGAGTCTGCT 255
                                                                  COnklin, D.C. and ree, D.P.
Proteins and polynucleotides encoding them
Patent: WO 0129221-A 69 26-APR-2001;
                                                               ZymoGenetics, Inc. (US)
                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. Conklin,D.C. and Yee,D.P.
                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                   AXI18905
Sequence 69 from Patent WO0129221.
                                                                                                                                                                                                  AX118905.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 662)
Baker, K.P., Goddard, A., Gurney, A.L., Hebert, C., Henzel, W., Kabakoff, R.C., Shelton, D.L., Smith, V., Watanabe, C.K. and Wood, W.I. Patent: WO 0073348-A 11 07-DEC-2000; Genentech, Inc. (US)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AX055696 662 bp
Sequence 11 from Patent WO0073348.
AX055696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AX055696.1 GI:12228831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
/organism="Homo sapiens"
/db_xref="taxon:9606"
1. 378
                                               Location/Qualifiers
                                                                                                                                                                                            GI:14035859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Homo sapiens"
/db_xref="taxon:9606"
187 c 167 g 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11.9%;
```

Score 90.6; DB 6; Pred. No. 5.6e-14; 0; Mismatches 99

99;

Indels Length

Gaps

۲.

78

156

4

TITLE

₽ δ 밁 Ş B Ş

8

밁

Ş

rocus

/note-"unnamed protein product"

codon\_start=

'protein\_id="CAC38526

¥ 8 δ 용 Ş В δÃ 밁 δÃ

256

199 201

141

139 81

79

DNA

linear

PAT 11-MAY-2001

260

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 8
AC007785/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Snoo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches 160;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (EYWORDS
                                                                                                                                                                                                 COMMENT
                                                                                      FEATURES
                                                                                                                                                                                                                                                     AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                144 AAGAGATGTGGGGGACAAGTTCTACGACCCCCTGCAGCACTGTTGCTATGATGATGCCGTC 203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATGAGGCCACGATGCTGCATCTTGGCTCTTGTCTGCTGGATAACAGTCTTCCTCCAG 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATGGCTCCCCGAGGCTGCATCGTAGCTGTCTTTGCCATTTTCTGCATCTCCAGGCTCCTC 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGTTCAAAAGGAACTACAGACGCTCCTGTTGGCTCAGGACTGTGGCTGTGCCAGCCGACA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGTGCTGCCCCTGGACCTT 280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTGCCCTTGGCCAGGACCCAGACGTGTGG----AAACTGCACCTTCAGAGTCTGCTTTGAG 260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTATCCTTAAAGGAGACCCGCCGCTGTGGCTCCACCTGCACCTTCTGGCCCTGCTTTGAG 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTCTGCTGTCCCGAGTCTTT 260
                                                                                                                                                                                                                                                                                                                                                                                Lamerdin, J.E., McCready, P.M., Richardson, P., Sakaldasis, G., Burkhart-Schultz, K., Gordon, L., Scott, D., Johnson, G., Stllwagen, S., Phan, H., Velasco, N., Do, L., Regala, W., Terry, A., Danganan, L., Erler, A., Christensen, M., Georgescu, A., Avila, J., Attix, C., Andreise, T., Amico-Keller, G., Coeffeld, J., Duarte, S., Lucas, S., Bruce, R., Thomas, P., Quan, G., Kronmiller, B., Arellano, A., Sanders, C., Ow, D., Nolan, M., Trong, S., Kobayashi, A., Olsen, A.S. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens chromosome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AC007785
                                                                                                                                          Submitted (11-JUN-1999) Joint Genome Institute, Lawrence Livermore National Laboratory, 7000 East Ave., Livermore, CA 94551, USA Map and sequence oriented from q centromere to telomere. BAC 282485 Map and sequence oriented from pases 1 to 4,419 of this overlaps cosmid R30477 to the left from bases 1 to 4,419 of this accession, and overlaps BAC 264576 (CIT-B-297N14; AC006362) from bases 146,203 to 166,500. Additional chromosome 19 map and sequence
                                                                                                                                                                                                                                                                                                                                Sequence analysis of a 2.5 Mb region in 19q13.2-13.3 between APOE and C5R1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AC007785.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                    Unpublished
                                                                                                                                                                                                                                                                            amerdin, J.E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (bases 1 to 166500)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /translation="MRPRCCILALVCWITVFLLQCSKGTTDAPVGSGLWLCQPTPRCGNKIYNPSEQCCVDDAILSLKETRRCGSTCTFWPCFELCCPESFGPQQKFLVKLRVLGMKSQCHLSPISRSCTRNRRHVLYP"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /db_xref-"GI:14035860"
                                  /organism="Homo sapiens"
/db_xref="taxon:9606"
/map="19q13.3 between DM and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        108 c
                                                                                                                                                                                                                                                                                                 ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11.6%;
                                                                          .166500
                                                                                                                                                                                                                                                                                                 166500)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        95 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       166500 bp DNA linear PRI 11-JUN-
ne 19, BAC 282485 (CIT-B-344H19), complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             88.8; DB 6;
No. 1.8e-13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   97;
     c5R1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 378;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRI 11-JUN-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ۳
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      misc_feature
                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                               repeat_region
             repeat_region
                                                                                                                          repeat_region
                                                     repeat_region
```

```
N39722 yx92e04.rl Homo saplens cDNA clone 269214 5'; (12. 170); 99% identity.-AA283147 zt14d07.rl NCI_CGAP_GCB1 Homo saplens cDNA clone IMAGE:713101 5'; (6. 163); 99% identity.-AA143160 z149d07.rl Soares pregnant uterus NbHPU Homo saplens cDNA clone 505261 5'; (1. 43); 100% identity.-AA142881 z149d07.sl Soares pregnant uterus NbHPU Homo saplens cDNA clone 505261 3'; (570. 527); 64% Homo saplens cDNA clone 505261 3'; (570. 527); 64%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                complement(472. .712)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone="CIT-B-344H19"
/clone_lib="Cal Tech CIT-B BAC library"
/note="LLNL clone name: BC282485"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /rpt_family="MIR" 746. .904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          complement(177.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        xgrail predictions. EST coverage is lacking for some xgrail predictions. EST coverage is lacking for some portions of the CDS. Gene may be alternatively spliced, a multiple transcripts map into this region; alternatively, these individual clones may represent artifactual events during RT and cDNA creation"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Join(<746. 904,1157. .1239,4294. .4451,5875. .6036,
12784. .12994,13080. .13162,13903. .13958,14053. .14128,
14429. .14568,14726. .14804,14982. .15039,15813. .15885
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /rpt_family="AluJb"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /rpt_family="(TGAA)n"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note-"DDS similarity to overlapping ESTs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        16025. 16122)

/note-"Hypothetical arginine-rich gene product;
/note-"Hypothetical CDS constructed from overlapping ESTs and
Hypothetical CDS constructed from some some coverage is lacking for some
                                                                                                                                                                                                                                                                                                                                                                                                                                                                overlapping ESTS:
N39722 yx92e04.rl Homo sapiens cDNA clone 269214 5';
(171. 255); 95% identity.-AA283147 zt14d07.rl
(171. 255); 95% identity.-CNA
NCI_CGAP_GCB1 Homo sapiens cDNA
clone TWAGE:713101 5'; (164. .247); 92% identity.-AA143160
z149d07.rl Soares pregnant uterus NbEPU Homo sapiens cDNA
z149d07.rl Soares pregnant uterus NbEPU Homo sapiens cDNA
clone 505261 5'; (44. .126); 100% identity.-N28707
yx66d11.rl Homo sapiens cDNA clone 266709 5'; (1. .66); 98%
yx66d11.rl Homo sapiens cDNA clone 266709 5'; (1. .66); 98%
identity.-AA142881 z149d07.sl Soares pregnant uterus NbHPU
identity.-CNA clone 505261 3'; (526. .438); 82%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1157. .1239
/note="predicted exon, program: grail2exons_human_1.3, /note="0, quality: good, score: 62.000-DDS similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SELALYKRGGRGSRGRGRPARPSPSPTGGRÄLRFDPTAFVKAKERKQREIQMKQQQRN
RLGSGGSGDGPSVSWSRQTQPPAALTGRGDAPNRSRNRSSSVDSFRSRCSSASSCSDL
EDFSESLSRGGHRRRGKPPSPTPWSGSMKSPPVERSHHQKSLANSGGWVPIKEYSSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /evidence=not_experimental
/product="BC282485_1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  frame: 0, quality: good,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               'codon_start=3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HQAADMAEIDARLKALQEYMNRLDMRS"
/rpt_family="MER64" 3841. .4060
                                                                                                                    /rpt_family="AluSg/x" complement(2747 . . 304
                                                                                                                                                                                                                                                                                           /rpt_family="AluSx"
complement/?^^^
                                                                                                                                                                              complement (2576.
                                                                                                                                                                                                                                    /rpt_family="LINE2"
complement/2000
                                                                                                                                                                                                            /rpt_family="AluSx"
                                                                                                                                                                                                                                                                                                                                                                                    rpt_family="(CA)n"
                                                                                     rpt_family="Alusx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                 dentity
                                                                                                                                                                                                                                                                                                                                                                                                               .1634
                                                                                                                                                                                    .2746)
                                                                                                                             3044)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6
```

Length 166500; Indels

۲

```
repeat_region
                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      misc_feature
                                                                   /note-"predicted exon, program: grail2exons_human_1.3,framm: 1, quality: excellent, score: 92.000"
                                                                                                                                                                                                                                                   Tdwoo
                                                                                                                                                                                                                                                                                                                                                                                                                                   complement(11864. .11885)
/rpt_family="AT_rich"
                                                                                                                                                                                                                                                                                                                                                                                                 rpt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /rpt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4294. .4451

//note-*DDS similarity to overlapping ESTS:
//note-*D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /rpt_family="Alusx"
complement(10587. ..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /rpt_family="AluJ"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /rpt_family="MER5B"
complement(9539 .9)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            complement(7792. .8054)
/rpt_family="MIR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               complement (8789,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  complement(7538. .7639)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                frame: 1, quality: excecomplement(6148. .6443)
/rpt_family="Alusx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note**DDS similarity to overlapping ESTs:
//1016**DDS similarity to overlapping ESTs:
//1016**A39722 yx92e04.rl Homo sapiens cDNA clone 269214 5';
//1016**A4143160 2149407.rl Scares
//1016**A4143160 2149407.rl Scares
//1016**A4142881 z149407.sl Scares
//1016**
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Complement (6608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5875. .5898

/note="DDS similarity to N28707 yx66d11.rl Homo sapiens cDNA clone 266709 5'; (223. .246); 100% identity."
                                                                                                                                                                                      _family="LINE2" 12384)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      complement(4789. .5083)
/rpt_family="Alusx"
5875. .5898
                                                                                                                                                                                                                                                             ement(12186. .12327)
_family="L1M1"
                                                                                                                                                                                                                                                                                                                       family="AT_rich"
                                                                                                                                                                                                                                                                                                                                                                  family="Alus"
ement/17055
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 family-"AT_rich"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           _family-"Alusg"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       family="AluJ" .11191)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /rpt_family="MER64"
4294. .4451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              family="Alusx"
ement(11067)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           _family-"AluSx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 _family="MER5B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      family-"(CA)n"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        family="MIR"
ement/7500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              _family=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            predicted exon, program: grail2exons_human_1.3, quality: excellent, score: 100.000"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Y-"AluJo"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "LINE2"
119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .9083)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .9841)
                              FEATURES
                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 9
AC007785
                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Locus
                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Db 121716 AGTCTTT 121710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Db 121776 AGACCCGCCGCTGTGGCTCCACCTGCACCTTCTGGCCCTGCTTTGAGCTCTGCTGTCCCG 121717
                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Db 121836 ACAAGATCTACAACCCTTCAGAGCAGTGCTGTTATGATGATGCCATCTTATCCTTAAAGG 121777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Db 121896 CCCCAGACGCTCCTGTTGGCTCAGGACTGTGGCTGTGCCAGCCGACACCCAGGTGTGGGA 121837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
Matches 121; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        274 GGACCTT 280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           157 ACAAGTTCTACGACCCCCTGCAGCACTGTTGCTATGATGATGCCGTCGTGCCCTTGGCCA 216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc_feature
                                 Submitted (11-JUN-1999) Joint Genome Institute, Lawrence Livermore National Laboratory, 7000 East Ave., Livermore, CA 94551, USA May and sequence oriented from q centromere to telomere. BAC 282485 overlaps cosmid 830477 to the left from bases 1 to 4,419 of this bases 146,203 to 166,500, Additional Chromosome 19 map and sequence
information may be obtained at:
http://www-bio.llnl.gov/bbrp/genome/genome.html
                                                                                                                                                                                                                                                                                                                                                                                                                          Lamerdin, J.E., McCready, P.M., Richardson, P., Sakaldasis, G., Burkhart-Schultz, K., Gordon, L., Scott, D., Johnson, G., Stilwagen, Phan, H., Velasco, N., Do, L., Regala, W., Terry, A., Danganan, L., Christensen, M., Georgescu, A., Avila, J., Attix, C., Andreise, T., Andores, G., Coefield, J., Duarte, S., Lucas, S., Bruce, R., Thomas, P., Quan, G., Kronmiller, B., Areilano, A., Sanders, C., Ow, D., Nolan, M., Trong, S., Kobayashi, A., Olsen, A.S.
                                                                                                                                                                                                                                                                            Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGACCCAGACGTGTGG---AAACTGCACCTTCAGAGTCTGCTTTGAGCAGTGCTGCCCT
                                                                                                                                                                                                                                                                                                     2 (bases 1 to 166500)
Lamerdin,J.E.
                                                                                                                                                                                                                                                                                                                                                                     Sequence analysis of a 2.5 Mb region in 19q13.2-13.3 between APOE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AC007785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AC007785

Homo sapiens chromosome 19, BAC 282485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AC007785.1 GI:5042403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            namur,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    complement(13799. .13954)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note-"predicted exon, program: grail2exons_human_1.3, frame: 2, quality: excellent, score: 100,000-DDs similarity to AA765166 nz 79c05.s1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1301672; (122. 48); 100%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /rpt_family="GC_rich"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="DDS similarity to AA765166 .nz79c05.s1 NCI_CGAP_GCB1
Homo sapiens cDNA clone IMAGE:1301672; (222. .123); 97%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            note="predicted exon, frame: 2, quality.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /rpt_family="GC_rich"
13080 .13162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /rpt_family="GC_rich"
12895. .12994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9.28;

 Mismatches

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 70.2; DB 9;
Pred No. 1.8e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear PRI 11-JUN-1
(CIT-B-344H19), complete
```

PRI 11-JUN-1999

Olsen, A.S. and

Stilwagen, S

```
source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     misc_feature
                       repeat_region
                                                                                              repeat_region
                                                                                                                                                        repeat_region
                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note-*DDS similarity to overlapping ESTs:
/note-*DDS similarity to overlapping ESTs:
N39722 yx92e04.rl Homo sapiens cDNA clone 269214 5';
N39722 yx92e04.rl Homo sapiens cDNA clone 1742.rt 1407.rl NCI_CGAP_GCB1
(12. 170); 99% identity -AA283147.zt14007.rl Soares pregnant uterus NbHPU
identity -AA143160 Z149407.rl Soares pregnant uterus NbHPU
identity -AA142881 z149407.sl Soares pregnant uterus NbHPU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           complement(177. .453)
/rpt_family="AluJb"...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1. .166500
/organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note-"Hypothetical arginine-rich gene product;
/note-"Hypothetical CDS constructed from overlapping ESTs and
Hypothetical CDS constructed from overlapping ESTs and
EXTRACT Predictions. EST coverage is lacking for some
Xgrail predictions of the CDS. Gene may be alternatively spliced, as
Multiple transcripts map into this region; alternatively,
these individual clones may represent artifactual events
during RT and CDNA creation"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             complement(472.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /map="19913.3 between DM and c5R1"
/clone="CIT-B-344H19"
/clone_lib="Cal Tech CIT-B BAC library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /db_xref="taxon:9606"
/chromosome="19"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /rpt_family="MIR"
146. 90"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /rpt_family-"(TGAA)n"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                note="LLNL clone name:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      join(<746.
                                                                                                                                                                                                                                                                                                                                                      N39722 yx92e04.rl Homo sapiens cDNA clone 269214 5';
(171. .255); 95% identity.-AA383147 zt14d07.rl
(171. .255); 95% identity.-AA383147 zt14d07.rl
NCI_CGAP_GCB1 Homo sapiens cDNA
clone IMAGE:713101 5'; (164. .247); 92% identity.-AA143160
clone IMAGE:713101 5'; (144. .126); 100% identity.-N28707
clone 505261 5'; (44. .126); 100% identity.-N28707
clone 505261 5'; (44. .126); 100% identity.-N28707
dentity.-AA142881 z149d07.s1 Soares pregnant uterus NbHPU
Homo sapiens cDNA clone 505261 3'; (526. .438); 82%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AEALRGLVRGLELELROERGLOHRVAGRRGODCRRLAKELEBAKASERSLARALKTUSELALVKRGGRGSRGRORPARPSPSPTGGRALAFDPTAFVKAKERKORE IQMKOQORN RLGSGGSGDGPSVSWSROTOPPAALTGRGDAPNRSRNRSSSVDSFRSRCSSASSCSDL EDFSESLSRGGHRRGKPPSPTPWSGSNMKSPPVERSHHOKSLANSGWVPIKEYSSE HQAADMAEIDARKALOEYMNRLDMRS"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note="predicted exon, program: grail2exons_human_1.3, frame: 0, quality: good, score: 62.000-DDS similarity overlapping ESTs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /translation="TlamdQPAGLQVDYVFRGVEHAVRVMVSGQVLELEVEDRMTADQ/translation="TlamdQPAGLQVDYVFRGVEHAVRVMVSGQVLELEVEDRMTADQWGEEDAGF1EDLTHKTGNFKQFNIFCHMLESALTQSSESVTLDLLTYTDLESLRNRK MRGEREGSLAPRSAQLNSKRYLILIYSVEFDR1HYPLPLPYQGKPDPVVLQGIIRSLKE ELGRLQGLDGQNTRDTRENEIMHLREQVSRLASEKRELEAQLGRSREEDALAGRAARQE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /evidence=not_experimental
/product="BC282485_1"
/protein_id="AAD38244.1"
/db_xref="GI:5042405"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /codon_start=3
complement(2200...2498)
/rpt_family="AluSx"
complement(2576...2746)
/rpt_family="AluSg/x"
                                                                                                                                                                  complement(2040.
                                                                                                                                                                                                    /rpt
                                                                                                                                                                                                                                   complement(1673.
                                                                                                                                                                                                                                                                                                                                 Ldentity

    2746. 904,1157. 1239,4294. 4451,5875. .6036,
    1994,13080. .13162,13903. 13958,14053. .14128,
    14568,14726. .14804,14982. .15039,15813. .15885,

                                                                                                  _family="LINE2"
lement/2200
                                                                                                                                                               _family="Alusx"
lement(20"
                                                                                                                                                                                                                                                                 _family="(CA)n"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                               repeat_region
                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         complement(2747. .3044)
/rpt_family="Alusx"
                                                                                                                                                                                                                                                                                                                                                                                                                                /rpt_family="AluSx"
complement(11065..11191)
/rpt_family="AluJ"
11322..11619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4294. 4451

4294. 4451

4294. A451

4294. A451

4294. A59204.rl Homo sapiens cDNA clone 269214 5';

42972 yx3204.rl Homo sapiens cDNA clone 269214 5';

4296. 438), 81% identity.-AA283147 zt14d07.rl

4256. 438), 81% identity.-AA283147 zt14d07.rl

4256. A38), 81% identity.-AA3143160 clone IMAGE:713101 5'; (248. 400); 99% identity.-AA143160 clone IMAGE:713101 5'; (248. 400); 99% identity.-AA143160 z149d07.rl Soares pregnant uterus NbHPU Homo Sapiens cDNA clone 266709 5'; (67. 222); yx66d11.rl Homo sapiens cDNA clone 266709 5'; (67. 222); yx6d11.rl Homo sapiens cDNA clone 505261 3'; (437. 275); 97% NbHPU Homo sapiens cDNA clone 505261 3'; (437. 275); 97%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="DDS similarity to overlapping ESTs: 939722 yx92e04.rl Homo sapiens cDNA clone 269214 5'; N39722 yx92e04.rl Homo sapiens cDNA clone 269216 5'; (439. .506); 71% identity.-AA143160 z149d07.rl Soares pregnant uterus NbHPU Homo sapiens cDNA clone 505261 5'; (282. .379); 100% identity.-AA142881 z149d07.sl Soares pregnant uterus NbHPU Homo sapiens cDNA clone 505261 3'; c74. .175); 95% identity."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5875. .5898

/note="DDS similarity to N28707 yx66d11.r1 Homo sapiens

CDNA clone 266709 5'; (223. .246); 100% identity."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  complement (4789. .5083)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            rpt_family="MER64"
                                                                                                                                                                                /rpt_family"AT_rich"
complement(11914. .11976)
/rpt_family"Alus"
/rpt_family"Alus"
complement/120ff
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /rpt_family="AluSx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       identity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         complement(6608.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               complement(7538.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            complement(7118.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 complement (8789.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /rpt_family="LINE2"
complement/77.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    complement (9539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /rpt_family="MIR"
complement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /rpt_family="MIR"
complement/7777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          complement(10587...10752)
/rpt_family="AluJ"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /rpt_family="AluSx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /rpt_family-"MER5B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /rpt_family="AluJo"
)456. .9520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /rpt_family="Alusx"
909. 904.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   rpt_family="(CA)n"
                                                                                                                                                                                                                                                                                                             /rpt_family="AT_rich" complement(11864. .11)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rpt_family="MER5B"
                                                      /rpt_tamily="Limi"
complement(12334. .12384)
                                                                                                                                                     /rpt_family="AT_rich"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                t_family="MER64"
                                                                                                                                                                                                                                                                                                                                                                                                            _family="AluSg"
                                                         10401
```

```
Db 158490 CTGGCCCTGCTTTGAGCTCTGCTGTCTTGATTCCTT 158525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Db 158430 TTACAATGACGCCATCGTGTCCCTGAGCGAGACCCGCCAATGTGGTCCCCCCTGCACCTT 158489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Db 158370 GCTGTGCCAGCCGGCACCCAGGTGTGGAGACAAGATCTACAACCCCTTGGAGCAGTGCTG 158429
                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 106;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             245 CAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTT 280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        188 CTATGATGATGCCGTCGTGCCCTTGGCCCAGGCCCAGACGTGTGG---AAACTGCACCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    128 GCTGTGCCAGCCACACAAGAGATGTGGGGACAAGTTCTACGACCCCCTGCAGCACTGTTG 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc_feature
                                                                                                                                                                     Submitted (05-OCT-2001) Psychiatry, Johns Hopkins Medical Institutions, 600 N. Wolfe St., Baltimore, MD 21287, USA
                                                                                                                                                                                                                                                                            Holnes, S.E., O'Hearn, E., Rosenblatt, A., Callahan, C., Hwang, H. Ingersoll-Ashworth, R.G., Fleisher, A., Stevanin, G., Brice, A., Potter, N.T., Ross, C.A. and Margolis, R.L. A repeat expansion in the gene encoding junctophilin-3 is associated with Huntington disease-like 2
                                                                                                                                                                                                                    Holmes,S.E., Ingersoll-Ashworth,R.G.,
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                        Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; I (bases 1 to 125020)
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
AF429315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AF429315.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AF429315
                                                                                                                                                                                                                                                          (bases 1 to 125020)
                                                                                                                                                                                                                                                                                                                                                                                                                                                   sapiens
                                             /map="16q24.3; between D16S520 and WI-12410"
/note="isolated from a patient with Huntington's
Disease-Like 2 (HDL2)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                           /organism="Homo sapiens"
/db_xref="taxon:9606"
/chromosome="16"
                                   /rpt_type=tandem
                                                                                                                                                                    1. .125020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 complement(13799. .13954)
/rpt_family="GC_rich"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="predicted exon, program: grail2exons_human_1.3, frame: 2, quality: excellent, score: 100.000-DDS similarity to AA765166 nz79c05.s1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1301672; (122. .48); 100%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GI:17646244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note="DDS similarity to AA765166 nz79c05.sl NCI_CGAP_GCB1
Homo sapiens cDNA clone IMAGE:1301672; (222. .123); 97%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Junctophilin 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              'rpt_family="GC_rich"
.3080. .13162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note="predicted exon, program: grail2exons_human_1.3,framm: 1, quality: excellent, score: 92.000"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /rpt_family="LINE2"
12784. .12994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8.58;
67.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      _family-"GC_rich"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               125020 bp DNA LINCELLIA (JPH3) gene, partial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 64.8; DB 9;
Pred. No. 5.4e-07;
0; Mismatches 47;
                                                                                                                                                                                                                   Ross, C.A. and Margolis, R.L.
                                                                                                                                                                                                                                                                                                                                                           Callahan, C., Hwang, H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 166500;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRI 18-JAN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ۲.
AC013622_0/c
WPCOMMENT
                                RESULT 11
                                                                                                                                                В
                                                                                                                                                                                                           В
                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                δõ
                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        γΩ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                               17622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                      17562 RRCCYMRGASSMRAGSMSRRRÅKGRSWGGRSKWWMTGGMWRSKYYYYCTGRRWMMTYMCC 17621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ω
                                                                                                                                                                  17502 YWCTCWCTSYMSYYRCTCWCKGWSSYTKSKSWSSSMSSYKKGRRKSYSMCCTSRGAMSCW 17561
                                                                                                                                                                                                                              17442 AMYRMRRMWKGRGALMMMCMKCYSRNSRCNMMMKSYCASCRSCANMSGTYMKCASYMCMSS 17501
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
                                                                                                                                                                                                                                                                                          17382 CWGSMWGSASRSSCYKCYKSMRCSMMSSKCYRCAGCMMMKGGYMRYMRCWSMKRRWWGKS 17441
                                                                          598 CAGGGACTCTGAACCCTCCTGATGACCCCSTATGGCCAACATCAACCCGGCACCACCC
                                                                                                                                                                                                                                                                                                                                                                                             17322
                                                                                                                                                                                                                                                                                                                                                                                                                    17262 YKSSMTMSMASYCWCMSMYYCSMRSMASRGMSWSSYMKMMKSSWRMSCYMKCCWCMKMCY 17321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                     538 GGCCCACAGGTCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTGCTGATGGGGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                17202 CCCNANTGGGGAAGCTTTTNCNKKTYSYYRKRNGCAMCKYNNYYNNSWRSSCRAGMSCTK 17261
                                                                                                                                                                                                 478 CTCAACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCGCTGCCCTGAGGA 537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17142 CSYCYAKCKSMCYSCYYGMSMKGYYYACSYRGSMSSKYCMRGSTYSTSCGCCCTTTTTCC 17201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17082 RKTKRKSRGKMKGAKWYMYYRRSMRKMKMYSSKGMYCMYCWGWGRRGCYCSCMTSRSAMC 17141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    17022 CKCYMSSYWTMSASYMSRRSYWKRSMKCWSRMCSRSRSKCKSRGCGGSMGKGKGGKSYG 17081
                                                                                                                                                                                                                                                                                                                                                              358
                                                                                                                                                                                                                                                                                                                                                                                     299 C-CAGAACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGCTAAT 357
                                                                                                                                                                                                                                                                                                                                                                                                                                                 239 CACCTTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCTGATAAA 298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               179 GCACTGTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCCAGACGTGTGGAAACTG 238
                                           CWRRRSYMYYRSMSAMGMRKSSWSGMRMMGSASSRRCKSASRSSWCSRRMKGMRGSC 17678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61 TITTOTGCATOTCCAGGCTCCTCTGCTCACACGGAGCCCCA--GTGGCCCCCATGACTCC 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gene
                                                                                                                                                                                                                                                           GCTGGTGTTACCTGAGATCTGGGATGCTGAGTGGCTGTTTGGGGGCCAGAGAAACACACA 477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mRNA
                                                                                                                                                                                                                                                                                                                         CMMRSMRSRGMSYYMYASWKSSSRGCYCTRCYWCMSSKSCYKSYYMMMRSKRMKGMKWSR 17381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTACCTGATGCTGTGCCAGCCACACAAGAGTTGTGGGGACAAGTTCTACGACCCCCTGCA 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTCCACTGCAACCAACCCAGAGCCATGGCTCCCCGAGGCTGCATCGTAGCTGTCTTTGCCA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29056
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /translation="MSSGGRENFDDGGSYCGGWEDGKAHGHGVCTGPKGQGEYTGSWSHGFKYEGVTWPSGNTYQGTWAQGKRHGIGLESKGKWVYKGEWTHGFKGRYGVRECAGNGKYEGTWSNGLQDGYGTETYSDG"
1 32731 c 30696 g 28283 t 4254 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /product="junctophilin 3"
/protein_id="AAL40941.1"
/db_xref="GI:17646245"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note="component of the junctional complex between plasma membrane and endoplasmic reticulum"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 complement(<36507. .36887).
/gene="JPH3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       complement(<36507.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /rpt_unit=ctg
complement(<36507. .>36887)
/gene="JPH3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note-"Jp3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /product="junctophilin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /gene="JPH3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6.2%; Score 47.2; DB
11.4%; Pred. No. 0.036;
itive 281; Mismatches 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .>36887)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               298;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 125020;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
```

<u>ب</u>

JOURNAL
MEDLINE
PUBMED
REFERENCE
AUTHORS
TITLE

REFERENCE AUTHORS

TITLE

SOURCE

ORGANISM

KEYWORDS VERSION DEFINITION

RESULT 10 AF429315. LOCUS

Q

Query Match

ACCESSION

FEATURES

source

JOURNAL

```
EFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ERSION
EYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OCUS
EFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              split into
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Cho:
Mammalia; Eutheria; Rode
1 (bases 1 to 436313)
Birren,B., Linton,L., N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AC013622 436313 bp
Mus musculus clone RP23-232H18,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Galagan, J., Gardyna, S., Grant, G., Hagos, B., Heaford, A., Horton, L., Howland, J.C., Johnson, R., Jones, C., Kann, L., Karatas, A., Klein, J., Lehoczky, J., Lleu, C., Locke, K., Macdonald, P., Marquis, N., McEwan, P., McGurk, A., McKernan, K., McLaughlin, J., Meldrin, J., Morrow, J., Naylor, J., Norman, C. H., O'Connor, T., O'Donnell, P., Peterson, K., Pollara, V., Riley, R., Roy, A., Santos, R., Severy, P., Peterson, K., Pollara, V., Riley, R., Roy, A., Santos, R., Severy, P., Peterson, K., Pollara, V., Riley, R., Roy, A., Santos, R., Severy, P., Peterson, K., Pollara, V., Riley, R., Roy, A., Santos, R., Severy, P., Peterson, K., Pollara, V., Riley, R., Roy, A., Santos, R., Severy, P., Peterson, K., Pollara, V., Riley, R., Roy, A., Santos, R., Severy, P., Peterson, K., Pollara, V., Riley, R., Roy, A., Santos, R., Severy, P., Peterson, K., Pollara, V., Riley, R., Roy, A., Santos, R., Severy, P., Peterson, K., Pollara, V., Riley, R., Roy, A., Santos, R., Severy, P., Peterson, R., Severy, P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 (bases 1 to 436313)
Birren, B., Linton, L., Nusbaum, C., Lander, E., Allen, N., Ande Baldwin, J., Barna, N., Beckerly, R., Boguslavkiy, L., Boukhgal Brown, A., Castle, A., Colangelo, M., Collins, S., Collymore, A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HTG; HTGS_PHASE1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AC013622.4 GI:8102534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Submitted (13-NOV-1999) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA Research, 320 Charles Street, Cambridge, MA 02141, USA Con May 30, 2000 this sequence version replaced gi:7329381. In repeats were identified using RepeatMasker: Smit, A.F. A. & Green, P. (1996-1997).

Smit, A.F. A. & Green, P. (1996-1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cooke, P., DeArellano, K., Dewar, K., Domino, M., Donelan, L., Doyle, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Morrow, J., Naylor, J., Norman, C.H., O'Connor, Y., O
peterson, K., Pollara, V., Riley, R., Roy, A., Santos, Peterson, K., Pollara, V., Subramanian, A., Stojanovic, N., Subramanian, A., Subramanian, A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Birren,B., Linton,L., Nusbaum,C. and Lander,E. wus musculus, clone RP23-232H18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tesfaye, S., Tirrell, A., Vassillev, H., Vo, A., Wheeler, J., Wu, X., Wyman, D., Ye, W.J., Zimmer, A. and Zody, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Inpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   wouse mouse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                nordered pieces.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NOTE: This is a 'working draft' sequence. It currently consists of 52 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as arbitrary.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: sequence_submissions@genome.wi:mit.edu
----- Project Information
Center project name: L3193
Center clone name: 232_H_18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Center: Whitehead Institute/ MIT Center for Genome Research Center code: WIBR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Web site: http://www-seq.wi.mit.edu
                                                                                                                                                                                                                                                                                                                                                           1 2045: contig of 2045 bp in length

2046 2145: gap of 100 bp

2146 4521: contig of 2376 bp in length

4522 4621: gap of 100 bp

4622 8024: contig of 3403 bp in length
                                                                                                                                                                                                                           1100 11199:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         400001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        fragments
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Begin
                                                                            13968: gap of 100 bp
18430: contig of 4462 bp in length
                                                                                                                                                                                                                                                                                    8124: gap of 10
11099: contig of
                                   18530:
                                                                                                                                                                             13868: contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  310000
410000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              110000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Forrest, C., Funke, R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AC013622 Accession AC013622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Craniata; Vertebrata; Euteleostomi;
Sciurognathi; Muridae; Murinae; Mus
100 bp
of 3166 bp in length
                                                                                                                                                                                                                                                               100 bp
of 2975 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  * * *
                                                                                                                                                                                        100 bp
of 2669 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ONA linear HTG 30-
SEQUENCING IN PROGRESS
                                                                                                                                                                                                  'n
                                                                                                                                                                                                       length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Boukhgalter, B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HTG 30-MAY-2000
ROGRESS ***, 52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Anderson, M.
```

```
21697 21796:
21797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  54715 54814: gap of 100 bp
54815 58285: contig of 3471 bp in
                                                                                                                                                                                                                                                                                                       101459 101558:
101559 10716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  58286 58385: gap of 100 bi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15996 36095:
                                                                                                                                                                                                                                                                                                                                                                                                                                                         63448 63547:
                                                                                                                                                                                                                                                                                              07168 107267
                                                                                                                                                                                                                                                                                                                                                                                     82082 82181:
                                                                                                                                                                                                                                                          13425 119681:
19682 119781: qa
                                                                                                                                                                                                          40501 140600:
                                                                                                                                                                                                                                                                                                                                 96762 96861:
                                                                                                                                                                                                                                                                                                                                          92114 92213; gap of 92214 96761; contig of
                                                                                                                                                                                         49111 149210:
                                                                                                                                                                                                                                                                                                                                                                                                                       3139 73238:
                                                                                                                      81343 18144
                                                                                                                                                      63962 164061
                                                                                                                                                                        56955 157054:
                                                                                                                                      2378 17247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20 32819:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                45253: gap or
49318: contig of 4065
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29457: gap of 
32719: con
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           49418:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      36095: gap of 10,
41396: contig of 53b
41496: gap of 100 b
45153: contig of 3657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25841:
                                                                                    26 197
                                                                                                                                                                                                                                                                                                                                                                                                                                        68066:
                                                                                                                                                                                                                                                                                                                                                                   86819:
237308: gap of
247157: contig
247257: gap of
                                                                                                                                                                                                                                                                                                Jo: gap of
107167: CT
7267
                                                                                                                                                                                                                                                                                                                  101458: cc.
                                                                                                                                                                                                                                                                                                                                                         819: gap of
92113: cont
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19: gap of
35995: contig of
                                                                                                                                                                                                                                                                                        113324:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11: gap of 29357: contil
                                                                    206982: cc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18: gap of 100 bp
54714: contig of 5296 bp
                                 227424: cr
                                                                                                                                                                                                                    140500:
                                                                                                                                                                                                                                      132230:
                                                                                                                                                                                                                                                      126056:
                                                                                                                                                                                                                                                                                                                                                                             .81: gap of I
86719: contig of
                                                                                                                                                                                                                                                                                                                                                                                                             38: gap of 100 bp
77301: contig of 4063 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                               67966: contig of 4419 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                       36: gap of 5072 k
73138: contig of 5072 k
                                                                                                                                                                                                                                                                                                                                                                                             82081: contig of 4680
                                                     ...: gap of
15973: ~
173
                                                                                                                                                 )61: gap of
72377: cont
                                                                                             5: gap of
225: contig of
                                                                                                                                                                                                                                                                                                                                                                                                     gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                         gap of
                                                                                                                                                                                                                                                                                      gap of 100 bp
                                                                                                                                                                       gap of
                                                                                                                                                                                                                   gap of 100 r
0: contig of 8170
                                                                                                                                                                                                                                             gap of
                                                                                                                                                                                                                                                             gap of
                                                                                                                                                                                                                                                                              gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           contig c
                                                                                                                                                                                                           gap
                                                                                                                                                                                        gap of
                                                                                                                      gap of
                                                                                                                                       gap of
                                                                                                                                                                                                                                                                                                                      p or 100 bp contig of 4597 k
                                                                                                                                                                                                                                                                                                                                                          contig of
                                                                                                                                                                                                                                                                   contig of 6257 bp
                                                                                                                                                                                                                                                                                                       contig of 5609
                                                                                                                                                                              contig of 7744
                                                                                                                                                                                                contig of 8510
                                                                                                                                                                                                                                                    contig of 6275
                                                                                                                                              contig of 8316
                                                                                                                                                                                                                                   contig of
                                                                       contig of 9657 br
                                                                                                                                                                contig
                                                                                                              contig of
                                                                                                                             contig of 8865
                                        contig of 11351
                                                          ontig of 8891 bp in length
                        contig of 9684
                                                                                                                                                                                                             of
                                                                                                                                                                  of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100
          of
                                                                                                                                                                                                                                                                                                                                                                                                                                                            100 bp
                                                                                                                                                                                                                                                                                                                                                                                                        100 bp
                                                                                        100
16 7823 b.
100 bp
1960 bp 1-
                                                                                                                                                                                                                                                                                                                                                     100 bp
                                                                                                                                                                                                                                                                                                                                                                      dg oot
                                                                                                                                                                                                                                                                                                                                                                                       100 pp
                                                                                                                                                                                                                                                                                                                                             4548
                                                                                                                                                                                             100 bp in
                                                                                                                                                                  6907
                                                                                                                                                                                                                                    100 bp ,
                                                                                                                                                                                                                             100 pp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ða
           100 bp
9849 bi
                                                                                                                                                                                            dq 001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ni dq
                                                                                                                                                                                                                                                                                                                                                                                                                                  bp in length
                                                                                                                                         dq
                                                                                                                                                                                                                                                                                                                                                                              ďď
                                                                                                                                                                                                                                                                                                                                                                                                ď
                                                                                                                                                                                                                                                                                                                                            bp in length
 9 bp in length
bp
                                                                                                                                                                                                                                                                                                                                                              ď
                                                                                                                                                                                                                                                                        ni dq
                                                                                                                                                                                                                                                                                                                           bp in length
                                                                                                                                                                                                                                                       bp in length
                                                                                                                                                                                                                                                                                         bp in length
                                                                                                                                                                                                                                                                                                           bp in length
                                                                                                                                                                                                                      bp in length
                                                                                                                                                 đđ
                                                                                                                                                                  ďď
                                                                                                                                                                                    ģ
                                                                              bp in
                                                                                                                                đđ
                           bp in
                                            ny dq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ħ
                                                                                                                                                                                                                                                                                                                                                                                in length
                                                                                                                                                                                                                                                                                                                                                                                                 ij
                                                                                                                                                                                                                                                                                                                                                              in length
                                                                                                                                                                                    ín
                                                                                                                                                                                                                                        in length
                                                                                                                                                                    'n
                                                                                                 in
                                                                                                                                                   Ħ
                                                                                                                 'n
                                                                                                                                  in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     leng
                                                                                                                                                                                                                                                                                                                                                                                                 length
                                                                                                                                                                                                                                                                           length
                                                                                                                                                                    length
                                                                                                                                                                                    length
                                                                                                                                                                                                      length
                                                                                                                                                   length
                                                                                length
                                                                                                 length
                                                                                                                 length
```

```
RESULT 13
AC021632_0/c
WPCOMMENT
                                                                                                                                                                                                                           Continuation (2 of 5)
                              Sequence split into 5
Fragment Name
AC021632_0
                                                                                                                                                                                                                                                                                                                                    Db 109342 CCACCTTCTTACTCCACAATGAATGGGCGAAGACTTGCCACTCCCCTGAGGACGAC 109287
                                                                                                                                                                                                                                                                                                            WPCOMMENT
                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                             Sequence split into 5 fragments LOCUS AC013622 Accession AC013622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                        AC021632_1
                                                                                           9342 CCACCTTCTTACTCCACAATGAATGGGCGAAGACTTGCCACTCCCCTGAGGACGAC 9287
                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                               Matches
                                                                                                                                                                                                                                                                  Fragment Name
AC013622_0
AC013622_1
                                                                                                       486 CCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCGCTGCCCTGAGGAGGCC 541
                                                                                                                                            AC013622_2
                                                                                                                                                                                                                                                                                                                                                   486 CCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCGCTGCCCTGAGGAGGCC 541
                                                                                                                                                                                                Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                    11/6
                                                                                                                                                                                                                                                                                                                                                                                                                                   69;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                122368 a
                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                289817 289916; gap of 100 bp
289917 305346; contig of 15430
100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     274136 274235; gap of 100 b
274236 289916; contig of 15581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        39947 340046
40047 3666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              305347 305446:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6638 366737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20003 320102:
20103 33994
                                                                                                                                                                                                                      of AC013622 from
    100001
200001
300001
                                       Begin
                                               fragments
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7258 261074: contig of 1075 261174: gap of
                                                                                                                                                                                           59.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone_11b="RPCI-23 Female Mouse BAC"
96120 c 95329 g 116149 t 6347 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /db_xref="taxon:10090"
/clone="RP23-232H18"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0 396209: gap of
                                                                                                                                                                                                                                                      100001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                     59.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            366637; cc 56737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   436313: contig of 40104 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     16737: gap of 100 bp
396109: contig of 29372 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      339946: cont
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         320002: cont
         End
110000
210000
310000
                                                                                                                                                                              Score 40.8; DB Pred. No. 2.1; 0; Mismatches
                                                                                                                                                                                   0,
410000
                                     Locus Ac021632 Accession Ac021632
                                                                                                                                                                                                                                                   110000
210000
310000
                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gap
                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 40.8; DI
Pred. No. 2.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ontig of 26591 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ap of 100 bp contig of 19844 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    contig of
                                                                                                                                                                                                       base 100001 (AC013622 Mus musculus clone RP23-23
                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches 47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100 bp
14556 bp in length
                                                                                                                                                                                               DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13817 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                    _DB 2; Length 110000;
                                                                                                                                                                              47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ďď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ďď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          bp in
                                                                                                                                                                                          Length 110000;
                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   in length
                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        length
                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Locus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AC021632_4
S AC021632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus
                                7435 47534
```

δÃ ₽

В Ş

```
'NOTE: This is a 'working draft' sequence. It currently consists of 56 contigs. The true order of the pieces is not known and their order in this sequence record is runs of N, but the exact sizes of the gaps are unknown as soon as it is available and the accession number will
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           All repeats were identified using RepeatMasker:
Smit, A.F.A. & Green, P. (1996–1997)
http://ftp.genome.washington.edu/RM/RepeatMasker.html
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted (16-JAN-2000) whitehead Institute/MIT Center for Research, 320 Charles Street, Cambridge, MA 02141, USA on Jun 9, 2000 this sequence version replaced 91:7408013.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   McPheeters, R., Meldrin, J., Meneus, L., Morrow, J., Naylor, J., Norman, C.H., O'Connor; T., O'Donnell, P., Olivar, T.M., Peterson, K., Pierre, N., Pisani, C., Pollara, V., Raymond, C., Riley, R., Rothman, D., Roy, A., Santos, R., Severy, P., Spencer, B., Stange-Thomann, N., Stojanovic, N., Subramanian, A., Talamas, J., Tesfaye, S., Theodore, J., Tirrell, A., Vassillev, H., Viel, R., Vo, A., Wu, X., Wyman, D., Ye, W.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Boguslavkiy L. Boukhgaiter B., Brown, A., Burkett G., Castle, A., Choepel, Y., Colangelo, M., Collins, S., Collymore, A., Cooke, P., Dewar, K., Dewar, K., Domino, M., Doyle, M., Fenestor, J., Ferreira, P., Fitzhugh, W., Forrest, C., Gage, D., Galagan, J., Grant, G., Hagos, B., Heaford, A., Horton, L., Howland, J.C., Johnson, R., Jones, C., Kann, L., Karatas, A., Klein, J., Macdonald, P., Marguis, N., McEwan, P., McGurk, A., McKernan, K., Marchaetere B., Marguis, N., McEwan, P., McGurk, A., McKernan, K., McChan, P., M
                                                                                                                         7029: contig of 7029 bp in length

7030 7129: gap of 100 bp

100 bp in length

7130 16474: contig of 9345 bp in length

16475 16574: gap of 100 bp in length

16575 25724: contig of 9150 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Birren, B., Linton, L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Anderson, S., Baldwin, J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Birren,B., Linton,L., Nusbaum,C. and Lander,E. Mus musculus chromosome 11, clone MGS1-213E3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HTG; HTGS_PHASE1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus chromosome 11 clone MGS1-213E3 map
ACO11632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Center project name: L5902
Center clone name: 213_E_3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: sequence_submissions@genome.w1.mit.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AC021632.4 GI:8389557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IN PROGRESS ***,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Web site: http://www-seq.wi.mit.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Center: Whitehead Institute/ MIT Center for Genome
5725 25824: gap of 10
5825 37070: contig of 1
7071 37170: gap of 1
7171 47434: contigorant 1
7434 47534: gap...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (bases 1 to 455450)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              400001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            unordered pieces.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nusbaum,C., Lander,E., Abraham,H., Allen,N.,
J., Barna,N., Beckerly,R., Beda,F.,
galter,B., Brown,A., Burkett,G., Castle,A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           455450 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
3 map 11,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ***
G.T.H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3 09-JUN-2000
SEQUENCING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Genome
```

56303 156402: .36058 136157:

gap of gap of

đ

67787:

L56302:

contig of 20145

nr. dq

103017:

102917: contig 3017: gap of

of

120081: co

contig of

17064 bp

'n

0181: gap of 136057: cont

67788 167887:

7887: gap of 183109: contig of

183209:

3209: gap of 196606: contig of

13397

ni dq

5883 296982

299603; cc 970°

contig of

100 bp 2654 bp 100 bp 2621 bp 100 bp 2090 bp 100 bp 3183 bp

ä

299703

301793: ~ 189°

contig of

gap of

contig of

317

320595: C

70: gap of 7124: contig of

July gap of 323155: 67

contig of contig of

60

ďq đđ

3371 bp

'n

dq 00

154 bp in

129626: cc

contig of

3242

9d 00

255: gap o: 26284: conf

contig of

100 bp 3029 bp

363795: gap of

367278:

contig of

363695; cc

of 100 bp contig of 5642 bp in

372002

377117: contig of

5115

ď

. gd

gap of gap of

of.

367378: gap of 371902: contig of

4524 bp in 3483 bp in

.00 bp 00 bp 349254: gap of 353824: cont

contig of contig of

100 bp 100 bp 1666 bp in 4666

in

353924: gap of

357953:

contig of

4029

bp bp in

344488 341975

gap gap

349154:

344388:

contig of

O.

dq 00

ď đđ đđ

'n

7289: gap of 341875: contig of

333582

3482:

contig of

pb in

gap of

37189: ~

contig of

ģ gd ďď

'n

310642: 30827 30517

gap of gap of

contig of contig of

3228

ďα

in

dq 00

dq 00

89

nr dq 8

176: gap of 08174: cont

ap of 100 bp contig of 2998 bp

in

89 287288:

289388: cc. 289388: cc.

100 bp 2100 bp in

289488:

291859: ~ 195°

25 219024

249572: contig of

gap of

6706: gap of 218924: contig of

100 bp 22218 bp in

60 291959:

294128: cc 1422°

contig of contig of contig of

dq 00

69

ďď

294228

4228: gap of 296882: contig of

```
9672: gap of 100 bp
287188: contig of 37516 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        contig of 15876 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             contig of 11385 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14246 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100 bp
2371 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100 bp
30548 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           bp
22 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                         bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   in length
                                                                                                                                                                                                                                                                                                                                        in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 in length
in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                length
                                                                                                                                                                                                                                                               length
                                                                                                                                                                                                                                                                                                                                                                                                                    length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    length
                                                                                                                                                                                      length
                                                                                                                                                                                                                           length
                                                                                                                                                                                                                                                                                                                                                                              length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     length
                                                                       length
                                                                                                            length
                                                                                                                                                  length
                                                                                                                                                                                                                                                                                                   length
                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 14
AC087162/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                             SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                 AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             18470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        486 CCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCGTGCCCTGAGGAGGCC 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCACCTTCTTACTCCACAATGAATGGGCGAAGACTTGCCACTCCCCTGAGGACGAC 18415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      69;
                                                                                                                                                                                                                                                                                                                                                                                                                                          AC087162 207588 bp
Mus musculus clone RP23-232H18,
                                                                                     Birren,B., Linton,L., Nusbaum,C., Lander,E., Allen,N., Anderson,S Barna,N., Bastien,V., Boguslavkiy,L., Boukhgalter,B., Brown,A., Camarata,J., Campopiano,A., Choepel,Y., Colangelo,M., Collins,S., Collymore,A., Cooke,P., DeArellano,K., Dewar,K., Diaz,J.S., Dodge,S., Faro,S., Ferreira,P., FitzHugh,W., Gage,D., Galagan,J., Gardyna.S., Ginde,S., Goverte M., Graham T., Grand-Nicken, Gardyna.S., Ginde,S., Goverte M., Gardyna.S., Ginde,S., Ginde,S., Goverte M., Gardyna.S., Ginde,S., Ginde,
                                                                                                                                                                                                                                                                                                                                                                                                        unordered pieces.
AC087162
                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Rodentia; 1 (bases 1 to 207588)
                                                                                                                                                                                                                                                                                                                                 Mus musculus
                                                                                                                                                                                                                                                                                                                                                                  HTG; HTGS_PHASE1
                                                                                                                                                                                                                                                                                                                                                                                        AC087162.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              119379
                       Jones, C., Karatas, A., Jones, C., Karatas, A., Levine, R.
                                                           Hagos, B., Heaford, A.,
                                                                               Gardyna,S.,
                                                                                                                                                                                                              Unpublished
                                                                                                                                                                                                                             Mus musculus, clone
                                                                                                                                                                                                                                                     Birren,B., Linton,L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            430388 4377
437708 437807
437808 4458
                                                                                                                                                                                          (bases 1 to 207588)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             382172 382271: g
382272 388833:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       445872 445971:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    130288 430387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          24417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               16045
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15945 416044:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    93531 393630:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10494 410593:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         52 40465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Mus musculus"
/db_xref="taxon:10090"
/chromosome="11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /clone="MGS1-213E3"
/clone_lib="Genome Systems Mouse BAC
104363 c 107639 g 117130 t 6939 of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .455450
                                                               Ginde,S., Goyette,M.,
leaford,A., Horton,L.,
                                                                                                                                                                                                                                                                                                                                                                                        GI:13446280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15971: gap of 455450: cont
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19034: gap of 100 1
404551: contig of 5517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     59.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4516: gap of 
430287: cont
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6044: gap of 424416: contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  398934: contig of 5304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        393530:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              445871:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           110493; cr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5944:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gap of 100 bp
3: contig of 6562 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  contig of 5771
                                                                                                                                                                                                                                     ., Nusbaum, C. RP23-232H18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            contig of 7320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   contig of 5842
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    contig of 4597 by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 contig of 5351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 40.8;
Pred. No. 2
                                           LaRocque, K.,
           McCarthy, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               of.
                                                                                                                                                                                                                                                                                         Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8064
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  dq 001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        dq 001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9d 00
                             MacLean
                                                               Hulme, W.,
                                                                                                                                                                                                                                                       and Lander, E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ďď
                                                             Graham, L., Grand-Pierre, N.,
Hulme, W., Iliev, I., Johnson,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA linear * SEQUENCING IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        bp in
                                             Lamazares, R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ďď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ďq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 110000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  others
                                                 Landers, T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                   HTG 25-MAR-2001
PROGRESS ***, 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                   Murinae; Mus
                                                                 Johnson, R.,
                                                                                                                                                                                  Anderson, S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
```

JOURNAL

```
Submitted (09-DEC-2000) Whitehead Institute/MIT Center for Genome Research, 320 Charles Street, Cambridge, MA 02141, USA on Mar 25, 2001 this sequence version replaced gi:13123247.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            http://ftp.genome.washington.edu/RM/RepeatMasker.html
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Strauss, N., Subramanian, A., Talamas, J., Tesfaye, S., Theodor Travers, M., Travis, N., Trigilio, J., Vassiliev, H., Viel, R., Viel, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This record will
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             arbitrary. Gaps between the contigs are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NOTE: This is a 'working draft' sequence. It currently consists of 109 contigs. The true order of the pieces is not known and their order in this sequence record is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Roy, A., Santos, R., Schauer, S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Rieback, M., Riley, R., Rise, C., Rogov, p
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                McPheeters,
                                                                                2936 13035;
                                                                                                                                                                                                     0587 10686: gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Center clone name: 232_H_18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Center project Information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: sequence_submissions@genome.wi.mit.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeats were identi
t, A.F.A. & Green, |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Web site: http://www-seq.wi.mit.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Center: Whitehead Institute/ MIT Center for Genome Research
                                                                                                                                                                       11440:
                                                                                                                                                                                                                                                                                                                      8500: gap of
9216: co
                                                                                                                                                                                                                                                               9911:
                                                                                                                                                                                                                                                                                                        9316:
                                                                                                                                                                                                                                                                                                                                                                                             7681:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6046:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3193: gap
3721:
                                                                                                                                                                                                                                                                                                                                                                                                                                         6947:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5 645; gap of
822; c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4956:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3821:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2071:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1668:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 922: gap of
                                                                                                                                                                                                                                                                 yap of 9811: 65
                                                                                                                                                                                            11340
                                                                                                                                                   12168:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Naylor, J
                                                                                                                                                                                                                                        10586
                                                                                                                                                                                                                                                                                                                                                                                                               /: gap of 7581: con
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    it is available and
                                                                                                                                                                                                                                                                                                                                                                      8400:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R., Meldrim, J., Meneus, L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                             6847
                                                                                         340: contig of 654 bp

340: contig of 654 bp

100 bp

168: contig of 728 bp

100 bp

100 bp

100 bp

100 bp

100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5946:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4856:
                                         gap of 10744: contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         309
  gap of 10
                                                                                                                                                                                                                                                   gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gap
                                                                                                                                                                                                                                                                                                                                                                                      gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   545: contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Genome Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             encer, B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pierre, N.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               the exact sizes of the gaps are
11 be updated with the finished
                                                                                                                                                                                                                 of 100 bp
contig of 675 bp in length
                                                                                                                                                                                                                                                                                                                                                               contig of 719
                                                                                                                                                                                                                                                                                                                                                                                                        contig of 634
                                                                                                                                                                                                                                                                                                                                                                                                                                               contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   contig of 177 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tified using RepeatMasker:
P. (1996-1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nguyen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Stange-Thomann, N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pollara, v
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100 bp
of 646 bp in length
                                                                                                                                                                                                                                                                                          100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of 545 bp in length
                                                  709
                                                                                                                                                                                                                                                                                                                                          100
                                                                                                                                                                                                                                                                                                                                                                                      100
                                                                                                                                                                                                                                                                                                                                                                                                                               100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100 bp
                                                                                                                                                                                                                                                                                                        ປ bp
716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100
                                                                                                                                                                                                                                                        495 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      dq 00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Үе,₩.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                    801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30 bp
1035 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1022 bp in length
                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                             ģ
                                       bp in length
                                                                                                                         bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Schupback, R.,
                                                                                         ni da
                                                                                                                                                                       bp in length
                                                                                                                                                                                                                                                                                                            bp in
                                                                                                                                                                                                                                                                                                                                                 bp in length
                                                                                                                                                                                                                                                                                                                                                                                           bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                    bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            bp in length
in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Norbu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           D., Oliver, J., Peterson, K., Raymond, C., Retta, R., Ov, P., Roman, J., Rosetti, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        accession number will
                                                                                  length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Young, G., Zainoun, J.,
                                                                                                                                                                                                                                                                                                            length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mihova, T., Mlenga, V.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         represented as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               are unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Norman, C.H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Seaman, S., Severy, P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Theodore, J.,
```

7728 47827: 3945 39044: 565 41664: 11 48940; 118 34117: gap of 100 bp 118 35264: contig of 1147 bp in length 265 35364: gap of 100 bp 165 36141: contig of 777 bp in length 242 37401: contig of 1160 bp in length 402 37501: gap of 100 bp 02 37501: 889 29988: 51863; 50455: 7 40336: 2 36241: 43210: 6610 16709 46250: 45482: 44318: 32 26231: gap of 1032 26231: gap of 1032 26231: gap of 1032 26944: contig of 7 105 27799: contig of 7 106 27899: gap of 106 27899: gap of 107 28692: contig of 7 107 28792: gap of 107 28792: ga 100 bp 100 bp 100 bp 100 bp 100 bp 100 bp 105 contig of 1415 br 176 pp 31537: 59 21658: 2 1867: 25395: 24639: 23820: 22446: 21133; 17946: gap of 20350: 19618: 44218 336: gap of 100 bp 41564: contig of 1228 | 564: gap of 100 bp 15952: 15180: 16150 45382: 100 bt 988: gap of 1096 31437: rock 1 1639: gap of 25295: 34017 32695: ~~ 24539: July 24539: 100 bp 127: contig of 1477 bg gap of 100 bp 150: contig of 668 br gap of 77. gap 71: gap of 19518: contig of qap 21033: 17846 20250: gap of 1558 15080: contig of 632 16609:  $1585\bar{2}$ 539: contig of 719 bp in length gap of 100 bp 95: contig of 656 bp in 1~gap of gap of 1058: contig of gap of In contig of contig of contig of 1064 contig of 1008 gap of gap of gap of contig of 1446 bp in contig of gap of gap of r or 100 bp contig of 1158 contig of 1449 gap of contig of contig of 1274 bp in length contig of contig of 625 P of 100 bp contig of 1137 p contig of 1480 bp in length 100 bp 100 bp of 736 bp 100 bp 101 length
100 bp in length
00f 425 bp in length
100 bp
0f 688 bp in length
100 bp 100 bp f 713 bj 064 bp in length 100 bp f 632 bp 100 bp f 847 bi đđ þ ф bp in length bp in ni dq bp in length bp in length dq g bp in length bp in length bp in length bp in bp in length đq bp in length bp in length bp in length in length bp in length bp in length bp in length in length length in length length length

```
* REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 15
AC018477/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    77663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    77603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metrazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Eukaryota; Metrazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

Elastooka; C., Adio-Oduola, B., Ali-osman, F.R., Allen, C.,
RS Muzny, D.M., Adams, C., Adio-Oduola, B., Ali-osman, F.R., Allen, C.,
RS Muzny, D.M., Bardaria, J.R., Banks, T., Barbaria, J.,
Benton, J., Binage, K., Blankenburg, K., Bonnin, D., Bouck, J.,
Benton, J., Binage, K., Blankenburg, K., Bonnin, D., Bouck, J.,
Bovie, S., L., Brown, E., Brown, M., Bryant, N.P., Buhay, C.,
Eurch, P., Burkett, C., Burrell, K.L., Byrd, N.C., Carron, T.F.,
Burch, P., Burkett, C., Burell, K.L., Byrd, N.C., Carron, T.F.,
Carter, M., Cavazos, S.R., Chacko, J., Chavez, D., Chen, G., Chen, R.,
Coyle, M.D., Dathorne, S.R., David, R., Davia, M.L., Davis, C.,
Coyle, M.D., Dathorne, S.R., David, R., Davia, M.L., Davis, C.,
Dugan, Rocha, S., Durbin, K.J., Earnhart, C., Edgar, D., Edwards, C.C.,
Dugan, Rocha, S., Durbin, K.J., Earnhart, C., Edgar, D., Edwards, C.C.,
Elhaj, C., Escotto, M., Falls, T., Ferraguto, D., Flagy, N., Ford, J.,
Foster, P., Frantz, P., Gabisi, A., Gao, J., Garcia, A., Garner, T.,
Garza, N., Gill, R., Gorrell, J.H., Guevara, W., Gunaratne, P., Hale, S.,
Hamilton, K., Harris, C., Harris, K., Hart, M., Haylak, P., Hawes, A.,
Hernandez, J., Harnandez, O., Hodgson, A., Hodloway, C.,
Hume, T., Long, P., Long, R., Bart, M., Hoyles, M., Holloway, C.,
Hume, T., Long, R., Long,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCACCTTCTTACTCCACAATGAATGGGCGAAGACTTGCCACTCCCCTGAGGACGAC 77548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCGCTGCCCTGAGGAGGCC 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                69;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AC018477 172090 bp DNA linear HTG 04-NOV-2000
Homo sapiens chromosome 19 clone RP11-67A5, WORKING DRAFT SEQUENCE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AC018477.12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14 unordered
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60124 60223: gap of 100 bp in length 60224 61343; contig of 1120 bp in length 61344 6143: gap of 100 bp in length 6144 63346; contig of 1903 bp in length 6347 63446; gap of 100 bp 63447 64248; contig of 802 bp in length 64249 64348; gap of 100 bp 64249 6453; contig of 2105 bp in length 64349 66553; gap of 100 bp in length 66454 66553; gap of 100 bp in length 66454 66553; gap of 100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B477.12 GI:11079337
HTGS_PHASE1; HTGS_DRAFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                71912: contig of 973 bp in length
72012: gap of 100 bp
73882: contig of 1870 bp in length
73882: gap of 1870 bp in length
73982: gap of 100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         56634: gap of 57911: contig of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     59011:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       58011:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          55138:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               67848:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          76008: gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 69658:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         59.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100 bp
70839: contig of 1181 bp in length
939: gap of 100 bp
71912: contic of 100 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            57911: contig of 1277 bp in length oll: gap of 100 bp 101 length of 900 bp in length oll: gap of 100 bp in length oll: gap of 1112 bp in length oll: gap of 1112 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         553: gap of 100 bp
67748: contig of 1195 bp in length
848: gap of 100 bp
69558: contig of 1710 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12: gap of 100 bp
5908: contig of 1926 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        contig of

 Mismatches

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 40.8;
Pred. No. 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100 bp
1396 k
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 2; Length 207588;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Gaps
                                                                                                Hale, S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

В Š 밁

/ERSION

130565

```
Mei,G., Metzker,M., Miner,G., Miner,Z., Mitchell,T., Mohabbat,K., Morgan,M., Morris,S., Moser,M., Neal,D., Newtson,J., Newtson,N., Nguyen,A., Nguyen,N., Nickerson,E., Nwokenkwo,S., Nguyen,A., Nguyen,N., Nickerson,E., Nwokenkwo,S., Oragunye,N., Ovledo,R., Pace,A., Payton,B., Oguh,M., Okwuonu,G., Oragunye,N., Ovledo,R., Pace,A., Payton,B., Quiles,M., Ren,Y., Rives,M., Rojas,A., Rojubokan,I., Rolfe,M., Quiles,M., Ren,Y., Rives,M., Rojas,A., Rojubokan,I., Rolfe,M., Quiles,M., Savery,G., Scherer,S., Scott,G., Shen,H., Shooshtari,N., Ruiz,S., Savery,G., Scherer,S., Scott,G., Shen,H., Shooshtari,N., Sisson,I., Sodergren,E., Sonaike,T., Sparks,A., Stanley,H., Sisson,I., Svatek,A., Tabor,P., Tamerisa,K., Stone,H., Sutton,A., Svatek,A., Tabor,P., Tamerisa,A., Tang,H., Tansey,J., Taylor,C., Taylor,T., Telfrod,B., Thomas,N., Tang,H., Tansey,J., Taylor,C., Taylor,V., Vilsoon,R., Wall,R., Wang,S., Ward-Moore,S., Warren,R., Washington,C., Wulliams,G., Williamson,A., Wleczyk,R., Wooden,S., Warley,K., Wu,C., Wu,Y., Wu,Y.F., Zhou,J., Zorrilla,S., Nelson,D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Kovar,C., Kratovic,J., Kureshi,A., Landry,N., Leal,B., Lewis,L.C., Lewis,L., Li,J., Li,Z., Lichtarge,O., Lieu,C., Liu,J., Liu,W., Loulseged,H., Lozado,R.J., Lu,X., Lucier,A., Lucier,R., Luna,R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Joudah,S., Karlsson,E., Kelly,S., K
Kovar,C., Kratovic,J., Kureshi,A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Submitted (12-DEC-1999) Human Genome Sequencing Center, Depart of Molecular and Human Genetics, Baylor College of Medicine, Baylor Plaza, Houston, TX 77030, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    on Nov 3, 2000 this sequence version replaced g1:9929562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Worley, K.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          and Gibbs,R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NOTE: Estimated insert size may differ from sequence length (see http://www.hgsc.bcm.tmc.edu/docs/Genbank_draft_data.html).
NOTE: This is a 'working draft' sequence. It currently consists of 14 contigs. The true order of the pieces is not known and their order in this sequence record is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 as soon as it is available and the accession number will be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 172090)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Consensus quality: 13859 bases at least Q40
Consensus quality: 157955 bases at least Q30
Consensus quality: 164360 bases at least Q30
Consensus quality: 164360 bases at least Q30
Estimated insert size: 1646402; sum-of-contigs estimation
Estimated insert size: 215352; agarose-fp estimation
Quality coverage: 2.9x in Q20 bases; agarose-fp estimation
Quality coverage: 3.8x in Q20 bases; sum-of-contigs estimation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Center project name: HMWL Center clone name: RP11-67A5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Web site: http://www.hgsc.bcm.tmc.edu/
Contact: hgsc-help@bcm.tmc.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      lnez,E., Massey,E., Mawhiney,E., McLeod,M.P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Chemistry: Dye-terminator Big Dye: 100% o. Assembly program: Phrap: version 0.990329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequencing vector: M13; L08821
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Center code: BCM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Center: Baylor College of Medicine
                                  114902
115002
                                                                                                                                51970
72905
73005
94297
94397
                                                                                                                                                                                                                                                                                                                                                                    28264
28364
51870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Maheshwari, M., Mapua, P., Martin, R., Martindale, A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ----- Summary Statistics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Karlsson, E., Kelly, S., Khan, U., King, L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Jacobson, B., Jia, Y.,
                                                                                                                                                                                                                                                                                                                                                                    28363:
51869:
51969:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Project Information
                                                                                                                                                                                                                                                                                                                            72904:
                                                                                                                                                                                                               gap of unknown length lands of 23506 bp in lands of 23506 bp in lands of 20506 bp in lands of 20505 bp in lands of
                                  gap of unknown length contig of 20505 bp in gap of unknown length contig of 15563 bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Johnson, R.,
3 bp in
length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100% of reads
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sum-of-contigs estimation
                                                                                                                                                                                                                                        length
                                                                                                                                                                                                                                                                                                                                 length
                                                                                                                                                                                                                                                                                                                                                                                                                               length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             length
                                                                                                                                          length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Jolivet, S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Meador, M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Korvah, J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tamerisa, K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Department
```

REFERENCE AUTHORS

JOURNAL TITLE

JOURNAL TITLE

COMMENT

```
us-09-092-297-5.rge
```

```
Search completed: November 3, 2002, 00:56:02 Job time : 3133 secs
                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                               35930 TCGTGGAGGTAAGGCGGGCAGACA 35907
                                                                                                               35990 AGCGTGTGGCCCGGGAGATCGTGGAGACAGAACGGGCCTATGTCAGGGACCTCCGCAGCA 35931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity 47.8%; Pred. No. 2.6;
Matches 155; Conservative 0; Mismatches 161; Indels 8;
                                                                                                                                                                                  36050 CCATCCGCCTACATCTCTCTCCGGTGGGGATCCCAGGTTCAGCCAGACCCTCAAGGCTGG 35991
                                                                                                                                                                                                                                                     36110 CAGCCCTGGGCCCACTCCAGCCTGCTCAGCCTCCAGGCCAGAGCCCCTTCCAGGGCCTC 36051
                                                                                                                                                                                                                                                                                                                        36170 CCTCCCCCCGAGGTTCTGGGAGCTCCACATCCCTGAGCACAGTGGGCTCTGAGGGGGATC 36111
                                                                                                                                                                                                                                                                                                                                                                                           36230 GGGGAGATTTCTCTGACCTCCTGTTCCACACCCCAGCAGCTCCTGCAGCCCCCACCATGG 36171
                                                                                        446 GAGTGGCTGTTTGGGGGCCAGAGA 469
                                                                                                                                                386 ATTCTCCTTCCTGGGTGGGCCTGGAGAAAGAGGCTGGTGTTACCTGAGATCTGGGATGCT 445
                                                                                                                                                                                                                     326 GGATGACAGGCTTTGTCGCAGTGTCAGCTAATGGAACATCAGGGGGAACGATGACTCCTGG 385
                                                                                                                                                                                                                                                                                      266 CTGCCCCTGGACCTTCATGGTGAAGCTGATAAACCAGAACTGCGACTCAGCCCGGACCTC 325
                                                                                                                                                                                                                                                                                                                                                          214 CCAGGACCCAGACGTGTGGAAACTGCACCT-----TCAGAGTCTGCTTTGAGCAGTG 265
                                                                                                                                                                                                                                                                                                                                                                                                                    154 GGGACAAGTTCTACGACCCCCTGCAGCACTGTTGCTATGATGATGATGCCGTCGTGCCCTTGG 213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Homo sapiens"
/db_xref="taxon:9606"
/chromosome="19"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   olone="RPII-67A5".
44179 c 43713 g 41606 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  you unknown length of 10006 bp in length unknown length length g of 5131 bp in length f unknown length length f unknown length f of 353 bp in length f unknown length length of 3606 bp in length of 3240 bp in length unknown length length length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            of 9529 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                length
bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1354 others
```

밁

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Post-processing:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                 Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                             Match
                   Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1736436 seqs, 858457221 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-092-297-5
763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         November 2, 2002, 22:59:17; Search time 212 Seconds (without alignments) 6179.272 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N_Geneseq_032802:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTCCACTGCAACCACCCAGA.....ATAAATTTATGTACTTTATA 763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GenCore version 5.1.3 Copyright (c) 1993 - 2002 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1980.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1981.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1982.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1983.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1983.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1985.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1985.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1987.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1988.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                       /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2000.DAT:*/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2001A.DAT:*/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2001B.DAT:*/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2002.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1994.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1995.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1995.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1997.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1998.DAT:*
                                                                                                                                                                                                                                           Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1998.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1999.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1992.DAT:
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1993.DAT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1990.DAT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1989.DAT:*
                                                                                                                                                                                                                                             Ħ
                                   AAX01686
AAX01687
AAA77668
AAA37062
AAA521491
AAC85962
AAF54298
AAA68111
                                                                                                                                                                                                                                                                                                           SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3472872
Urinary tract tiss
Urinary tract tiss
Human PRO1274 CDNA
Human PRO1274 (UNO
Human cDNA sequence
Native sequence of
DNA encoding prote
Human bladder spec
                                                                                                                                                                                                                                    Description
```

0 0 0 0 0

	``																																		C	
	4	4	- L	4 2	41	40	9	e a	) (L	36	ω	34	ω ω	32	3	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	υ ω	12	11	10
	39.4	٠.	. 4	9.5	9		ı,	5 8	5 00	58	··	ω.	ü	ω	64.8		Ψ.	4	6	68	83	68	68	8	78	78	8	90.6	0	0	0	œ	ب			
			5 2																						0		$\vdash$	۳,	1	1	۳	9	5	0	4	o,
	467	467	467	467	10732	378	2044	1942	1724	1449	245	245	245	245	445	445	445	445	549	789	610	610	610	376	1286	1146	378	662	662	662	662	1338	196	236	417	748
	N	N	22	N	<b>F</b> )	$\mathbf{L}$	A.	K)		. 1	K.3																									
•	AAK03648	13	ABA55405	ABA44931	AAA10594	AAT24159	AAS69642	AAS77486	AAS77238	AAS74277	AAI50488	AAK44496	AAK18578	ABA70342	AAI37303	AAK31411	AAK05787	ABA57723	AAS92055	AAA87684	AAF54297	AAS21490	AAA37061	AAA45557	AAS70901	AAS75346	AAH52127	AAC91558	AAC91476	AAA51261	AAC58632	AAS92056	AAX01683	AAX01684	AAX01685	AAZ98158
,	brain expi	#3597 £	foetal	breast cel	encoding	an gene signat	encoding	encoding	encoding	ncoding		0000	Proced Five	footal laws	1110111	7 6	ביים במד	n foetal	9:	Himan secreted ore	9:	ANC P	PRO1275	paternes n	encoding	DNA encoding novel	Himan and protots	200000	Himan programma	DNA OF	total capoad	odina novo	1000	V tract tie	ביים להשרל לים	nont.

## ALIGNMENTS

AAX01686;

AAX01686 standard; DNA; 763 BP

```
RESULT 1
AAXO1686
ID AAXO
XX AXO
AX AXO
AX AXO
DT 21-A
DE Urin
XX BL17
XX BL17
XX HOMC
PN WO98
XX HOMC
PN WO98
XX O5-(
XX AXO
PT GOT(
PN WD1
XX WPI
XX New
New purified polynucleotide BL172 derivatives and encoded polypeptides - useful in the identification of markers, \mathbf{w}
                                                                                              Billing-medel PA, Cohen M,
Gordon J, Granadosen, Hodge
Roberts-Rapp L, Russell JC,
                                                                WPI; 1999-045802/04.
                                                                                                                                                                                                                                                                                                                                                                                                        BL172; urinary tract; marker; cancer; recombinant; human; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                            Urinary tract tissue library BL172 gene full length clone 1554838IH
                                                                                                                                                                                 (ABBO ) ABBOTT LAB.
                                                                                                                                                                                                                       05-JUN-1997;
                                                                                                                                                                                                                                                             05-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                   10-DEC-1998.
                                                                                                                                                                                                                                                                                                                                        WO9855656-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21-APR-1999 (first entry)
                                                                                                                                                                                                                   97us-0869579.
                                                                                                                                                                                                                                                           98WO-US11693.
                                                                                                                    Cohen M, Consen, Hodges
                                                                                          Colpitts TL, Friedman PN;
es SC, Klass MR, Kratochvil JD;
Stroupe SD, Yu H;
```

γ

721

CAGGAGCAAAGCACAGGATCATAATAAATTTATGTACTTTATA

763

```
Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches 762;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This represents a full-length sequence of a clone specific for urinary tract tissue library BL172. The BL172 polynucleotides (AAXO1683-87) are used to detect target BL172 polynucleotides and BL172 MRNA and the BL172 polypeptides are used to detect BL172 antigens/antibodies in a test sample. The identification of certain markers in these methods are indicative of the presence of urinary tract disease, especially cancer. Additionally, the polypeptides are used to detect antibodies that bind specifically to a BL172 epitope derived from a BL172 polypeptide. Host cells containing a recombinant expression vector comprising the BL172 polynucleotide sequences are used to produce the polypeptides containing BL172 epitopes. The methods aid in diagnosis, detection, staging, monitoring, prognostication, in vivo imaging, prevention and treatment of diseases or conditions associated with BL172, especially urinary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 763 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         indicative of urinary tract diseases or
661
                                  661
                                                                     601
                                                                                                        601
                                                                                                                                       541
                                                                                                                                                                          541
                                                                                                                                                                                                             481
                                                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                                42I
                                                                                                                                                                                                                                                                                                                   421
                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCACAGGTCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTGCTGATGGGGGGCCCAG
                  TGGCTGGGGAACCCTTCACCCTTCTGTGAGATTTTCCATCATCTCAAGTTCTCTATC
                                                                GGACTCTGAACCCTCCTGATGACCCSTATGGCCAACATCAACCCGGCACCACCCCAAGGC
                                                                                                                                                                                                     AACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCGCTGCCCCTGAGGAGGC 540
                                                                                                                                                                                                                                                                                               GGTGTTACCTGAGATCTGGGATGCTGAGTGGCTGTTTGGGGGGCCAGAGAAACACACTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCTTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCTGATAAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGGCTGGGGAACCCTTCACCCTTCTGTGAGATTTTCCATCATCTCAAGTTCTCTATC
                                                                                                                                                                                                                                                                              AGAACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGCTAATGGA
                                                                                                                                                                                                                                                                                                                                                AGAACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGCTAATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCTTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCTGATAAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCTGATGCTGTGCCAGCCACACAAGAGATGTGGGGGACAAGTTCTACGACCCCCTGCAGC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ۲,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Page 89-90; 114pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     162 A; 231 C; 195 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 762.6;
Pred. No. 6.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     175 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; DB 20;
5.7e-215;
hes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         conditions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                               480
                                                                                                                                                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   180
                                                                 660
                                                                                                    660
                                                                                                                                       600
                                                                                                                                                                        600
                                                                                                                                                                                                                                                                              480
                                                                                                                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                                                                                                                                                                                          360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

밁 Ş 밁 δÃ 밁 Ş В δÃ 밁 Ş 밁 δÃ В δõ 밁 Š 밁 Š 밁 Ş 밁 Š 밁 Š

밁 οy

CTCCACTGCAACCACCCAGAGCCATGGCTCCCCGAGGCTGCATCGTAGCTGTCTTTGCCA 60 Query Match Best Local S Matches 763

1 Similarity 763; Conserv

99.9%; ilarity 100.0%; Conservative (

0;

Score 762.6; pred. No. 6.7 0; Mismatches

DB 20; 5.7e-215; es 0;

Indels Length

0

Gaps

0

60

Sequence

763

BP; 162 A; 231 C; 194 G;

175

T; 1 other;

```
RESULT 2
AAX01687
ID AAX0
XX
AC AAX0
XX
DT 21-A
XX
XXXXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           XXXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          X B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tract tissue library BL172. The BL172 polynucleotides (AAX01683-87) are used to detect target BL172 polynucleotides and BL172 mRNA and the BL172 polypeptides are used to detect BL172 antigens/antibodies in a test sample. The identification of certain markers in these methods are indicative of the presence of urinary tract disease, especially cancer. Additionally, the polypeptides are used to detect antibodies that bind specifically to a BL172 epitope derived from a BL172 polypeptide. Host cells containing a recombinant expression vector comprising the BL172 polynucleotide sequences are used to produce the polypeptides containing BL172 epitopes. The methods aid in diagnosis, detection, staging, monitoring, prognostication, in vivo imaging, prevention and treatment of diseases or conditions associated with BL172, especially urinary
                                                                                                                                                                                                                                                                                              New purified polynucleotide BL172 derivatives and encoded polypeptides - useful in the identification of markers, wi indicative of urinary tract diseases or conditions
                                                                                                                                                                                                                                                                                                                                                               WPI; 1999-045802/04.
P-PSDB; AAW92252.
                                                                                                                                                                                                                                                                    Claim 1; Page 90;
                                                                                                                                                                                                                                                                                                                                                                                                                               Billing-medel
Gordon J, Gr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BL172; urinary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Urinary tract
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAX01687;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAX01687 standard; DNA;
                                                                                                                                                                                                                                 This represents a consensus sequence of a clone specific for urinary
                                                                                                                                                                                                                                                                                                                                                                                                             Roberts-Rapp L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (ABBO ) ABBOTT LAB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            05-JUN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         05-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO9855656-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             721 CAGGAGCAAAGCACAGGATCATAATAAATTTATGTACTTTATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sapiens
                             cancer
                                                                                                                                                                                                                                                                                                                                                                                                                              Granadosen,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                              PA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tissue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        97US-0869579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         98WO-US11693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tract; marker; cancer; recombinant; human; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /*tag= a
/product= "BL172 polypeptide"
/note= "the start codon is not indicated"
                                                                                                                                                                                                                                                                                                                                                                                                           , Cohen M, Colpitts TL, dosen, Hodges SC, Klass Russell JC, Stroupe SD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                114pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  library BL172 gene consensus sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ВP
                                                                                                                                                                                                                                                                                                                                                                                                             MR, K
                                                                                                                                                                                                                                                                                                                                                                                                                                         Friedman
                                                                                                                                                                                                                                                                                                                                                                                                                              Kratochvil JD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             763
                                                                                                                                                                                                                                                                                                                  which
```

```
문
                                                                                                                                                                                                                δõ
                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                               γO
                                                                                                                                                                                                                                                                                                              Q
                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                망
                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                              ₽
                                                                                                                                                                                                                                                                                                                                                                            Q
                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ő
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
01-DEC-1998;
                                                              Homo
                                                                       Human; PRO; promotion; inhibition; anglogenesis; cardiovascularisation; diagnosis; trauma; wound; cancer; atherosclerosis; cardiac hypertrophy; anglogenic; proliferative; cardiant; cardiovascular; antiatherosclerotic; cytostatic; gene therapy; vaccine; ss.
                                                                                                                Human PRO1274 cDNA sequence SEQ
                                                                                                                                  07-NOV-2000
               30-NOV-1999;
                              08-JUN-2000
                                              WO200032221-A2
                                                                                                                                                                AAA77668
                                                                                                                                                                                                       721
                                                                                                                                                                                                                                     661
                                                                                                                                                                                                                                                                                   601
                                                                                                                                                                                                                                                                                                541
                                                                                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                            361
                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                   CAGGAGCAAAGCACAGGATCATAATAAATTTATGTACTTTATA 763
                                                              sapiens
                                                                                                                                                                                                                                GGACTCTGAACCCTCCTGATGACCCSTATGGCCAACATCAACCCGGCACCACCCCAAGGC
                                                                                                                                                                                                                                                                                             CCACAGGTCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTGCTGATGGGGGGCCCAG
                                                                                                                                                                                                                                                                                                                            AACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCGCTGCCCTGAGGAGGC
                                                                                                                                                                                                                                                                                                                                                           CCTTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCTGATAAACC
                                                                                                                                                                                                                                                                                                                                                                                                                        AGAACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGCTAATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                 AGAACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGCTAATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACTGTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCAGACGTGTGGAAACTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACTGTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCAGACGTGTGGAAACTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCTGATGCTGTGCCAGCCACACAAGAGATGTGGGGACAAGTTCTACGACCCCCTGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  standard;
                                                                                                                                (first entry)
98WO-US25108
              99WO-US28313.
                                                                                                                                                               cDNA;
                                                                                                                                                               771
                                                                                                                                                               B₽.
                                                                                                                 ID NO:196.
                                                                                                                                                                                                                                                                                                              .600
                                                                                                                                                                                                                                                                              660
                                                                                                                                                                                                                                                                                               600
                                                                                                                                                                                                                                                                                                                                            540
                                                                                                                                                                                                                                                                                                                                                            480
                                                                                                                                                                                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                                                                                                                                           420
                                                                                                                                                                                                                                                                                                                                                                                                          420
                                                                                                                                                                                                                                                                660
                                                                                                                                                                                                                                                                                                                             540
                                                                                                                                                                                                                                                                                                                                                                                                                          360
                                                                                                                                                                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     240
```

```
CC The present invention describes nucleic acids encoding PRO polypeptides CC useful for preventing, diagnosing and treating diagnosing a CC cardiovascular, endothelial or angiogenic disorder in mammals by CC modulating cell proliferation, angiogenic disorder in mammals by CC and for identifying agonists and antagonists of these processes. The CC nucleic acids and the proteins they encode may be used in the CC prevention, treatment and diagnosis of diseases associated with CC inappropriate PRO expression such as cardiovascular, endothelial or CC cardiac hypertrophy). For example, the nucleic acids (NCs) and vectors CC containing them and the PRO expression and be used to treat disorders CC containing them and the PRO expression. AAA77510 to AAA77721 and CC catilac hypertrophy; For example, the nucleic acids (NCs) and vectors CC containing them and the PRO expression. AAA77510 to AAA77721 and CC catilac hypertrophy; For example, the nucleic acids (NCs) and vectors CC containing them and the PRO expression. AAA77510 to AAA77721 and CC catilac hypertrophy; For example, the nucleic acids (NCs) and vectors CC containing them and the PRO expression. AAA77510 to AAA77721 and CC catilac hypertrophy; For example, the nucleic acids to treat disorders associated with decreased PRO expression. AAA77510 to AAA77721 and CC catilac hypertrophy; For example, the nucleic acids (NCs) and vectors associated with decreased PRO expression.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20-JUL-1999
26-JUL-1999
01-SEP-1999
08-SEP-1999
13-SEP-1999
15-SEP-1999
15-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16-DEC-1998;
12-JAN-1999;
08-MAR-1999;
12-MAR-1999;
28-APR-1999;
14-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                 Nucleic acids encoding PRO polypeptides useful for preventing, diagnosing and treating diagnosing a cardiovascular, endothelial angiogenic disorders in mammals -
                                                                                                                                                                                                                                                                                                               Claim 61; Fig 75; 315pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Godowski PJ,
Watanabe CK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               02-JUN-1999;
23-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ashkenazi AJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (GETH )
                                                                                                                                                                                                                                                                                                                                                                                                                                   2000-412154/35.
)B; AAB24425.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENENTECH INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Baker KP, I
Gurney AL, I
Williams PM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99US-0141037.
99US-0144758.
99US-0145698.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99US-0131445.
99US-0134287.
99WO-US12252.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98US-0112850.
99US-0115554.
99WO-US05028.
99US-0123957.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99WO-US21547
99WO-US23089
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99WO-US21090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99WO-US20944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99WO-US20594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99WO-US20111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ferrara N,
Klein RD,
M, Wood WI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Kuo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gerber H, Hillan KJ, Go
Kuo SS, Paoni NF, Smith
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Goddard
                                                                                                                                                                                                                                                                                                                                                                      or
P
```

Sequence 771 BP; 169 A; 231 C; 195 G; 176 T; 0 other;

0;

Query Match

Š 멍 δÃ 밁 δõ 멍 δĀ 밁 ρy Matches 181 181 121 121 61 61 Local س ACTGTTGCTATGATGATGATGCCGTCGTGCCCTTGGCCAGGACCCAGACGTGTGGAAACTGCA ACCTGATGCTGTGCCAGCCACAAGAGATGTGGGGACAAGTTCTACGACCCCCTGCAGC TTTTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCCAGTGGGCCCCCATGACTCCTT CTCCACTGCAACCACCCAGAGCCATGGCTCCCCGAGGCTGCATCGTAGCTGTCTTTGCCA CTCCACTGCAACCACCAGAGCCATGGCTCCCCGAGGCTGCATCGTAGCTGTCTTTGCCA ACCTGATGCTGTGCCAGCCACACAAGAGATGTGGGGGACAAGTTCTACGACCCCCTGCAGC TTTTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCATGACTCCTT Similarity 99.7 61; Conservative 99.78; 1; Score 761; DB 21 Pred. No. 2e-214; 1; Mismatches 21; 1; Length 771; Indels 0; Gaps 300 240 240 180 180 120 120 60 60

**************************************	חז אד	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Human; PKO pot transmembrane; ss.  Homo sapiens  WG200012708-A2  09-MAR-2000.  01-SEP-1998; 01-SEP-1998; 01-SEP-1998; 02-SEP-1998; 02-SEP-1998; 02-SEP-1998; 09-SEP-1998; 09-SEP-1998; 09-SEP-1998; 10-SEP-1998;	721 CAGGAGC 1721 CAGGAGC 1721 CAGGAGC 1721 CAGGAGC 1721 CAGGAGC 1721 A 1	_
polypeptide; membrane bound protein; receptor; diagnosis; ne; secretion; immunoadhesion; pharmaceutical; screening; s.  -A2.  -A2.  -A2.  -A2.  -A2.  -A2.  -A2.  -A3.  -A3.  -A3.  -A3.  -A3.  -A4.	AAAGCACAGATCATAATTAATTTATGTAG AAAGCACAGGATCATAATTAATTTATGTAG AAAGCACAGGATCATAATTTATGTAG ndard; cDNA; 771 BP. (first entry) 4 (UNQ644) cDNA sequence SEQ I	CTTTGTCGC
תק תק הק	אי א	ט ק ק ק ק ק ק ק ק ק ק ק ק ק ק ק ק ק ק ק
		10-SEP-1998 15-SEP-1998 15-SEP-1998 16-SEP-1998 16-SEP-1998 16-SEP-1998 16-SEP-1998 16-SEP-1998 16-SEP-1998 17-SEP-1998 17-SEP-1998 17-SEP-1998 17-SEP-1998 17-SEP-1998 17-SEP-1998 17-SEP-1998 17-SEP-1998 17-SEP-1998 18-SEP-1998 18-SEP-1998 18-SEP-1998 18-SEP-1998 18-SEP-1998 18-SEP-1998 18-SEP-1998 23-SEP-1998 23-SEP-1998 23-SEP-1998 23-SEP-1998 23-SEP-1998 23-SEP-1998 23-SEP-1998
NUS-01026 NUS-01034 NUS-01033 NUS-01033 NUS-01033 NUS-01033 NUS-01033 NUS-01036	305 01017 305 01017 305 01019 305 01019 305 01019 305 01019 305 01023 305 01023 305 01023 305 01023 305 01024	

```
Page 5
```

```
δÃ
                                                                                                                                                                     밁
                                                                 Š
                                                                                      밁
                                                                                                                           Query Match
Best Local S
Matches 761
                                                                                                                                                                              AAA37022 to AAA37144 encode the new isolated human transmembrane, receptor or secreted PRO polypeptides given in AAY99340 to AAY99462. The transmembrane and receptor PRO proteins can be used for screening of potential peptide or small molecule inhibitors of the relevant receptor/ligand interactions. The polypeptides and nucleotide sequences encoding then have various industrial applications, including uses as pharmaceutical and diagnostic agents. AAA37145 to AAA37330 represent PCR primers and hybridisation probes used in the isolation of the PRO polypeptides from the present invention.
                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                       New mammalian DNA sequences encoding transmembrane, receptor or secreted PRO polypeptides, useful for screening of potential peptide or small molecule inhibitors of the relevant receptor/ligand interactions
                                                                                                                                                                                                                                                                                                                                                                                                                          18-NOV-1998;
18-NOV-1998;
18-NOV-1998;
18-NOV-1998;
18-NOV-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        03-NOV-1998;
03-NOV-1998;
10-NOV-1998;
17-NOV-1998;
                                                                                                                                                                                                                                                                                         Claim 2; Fig
        121
                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18-NOV-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     17-NOV-1998
17-NOV-1998
                                                                                                                                                                                                                                                                                                                                                                                                      (GETH )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          17-NOV-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17-NOV-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 17-NOV-1998
17-NOV-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     03-NOV-1998
                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29-OCT-1998
                                                                  61
ACCTGATGCTGTGCCAGCCACACAGAGATGTGGGGGACAAGTTCTACGACCCCCTGCAGC 180
                                                                                CTCCACTGCAACCACCCAGAGCCATGGCTCCCGAGGCTGCATCGTAGCTGTCTTTGCCA
                                        2000-237871/20.
                                                                                                                             761;
                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                      GENENTECH
                                                                                                                                                                   771 BP;
                                                                                                                                                                                                                                                                                                                                                                                 Goddard A,
                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                        81; 773pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         98US-0106932.
98US-0106934.
98US-0107783.
98US-0108775.
98US-0108779.
                                                                                                                                                                                                                                                                                                                                                                                                                                  98US-0108851.
98US-0108852.
98US-0108858.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S086
S086
S086
                                                                                                                                                                                                                                                                                                                                                                                                                                                                98US-0108849.
98US-0108850.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98US-0108925
98US-0108848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         98US-0106030.
98US-0106032.
98US-0106033.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9805-0108802
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98US-0106919
98US-0106932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          98US-0106905
                                                                                                                                                                    169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98US-0106902:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SU86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       98US-0106464.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98US-0108500
                                                                                                                                                                                                                                                                                                                                                                                                      INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -0108787.
                                                                                                                                    99.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -0108801
                                                                                                                                                                 A; 231 C; 195 G; 176 T;
                                                                                                                                                                                                                                                                                                                                                                                  Gurney AL,
                                                                                                                                                                                                                                                                                        English.
                                                                                                                           1;
                                                                                                                         Pred. No. 2e-2
l; Mismatches
                                                                                                                                  Score 761; DB 21;
Pred. No. 2e-214;
                                                                                                                                                                                                                                                                                                                                                                               Smith V,
                                                                                                                                                                                                                                                                                                                                                                               Watanabe CK,
                                                                                                                                                                0 other;
                                                                                                                                            Length
                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                               Wood
                                                                                                                        0;
                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                               WI;
                                          120
                                                             120
                                                                                60
                                                                                                    60
                                                                                                                                                                                                                                                                                                                  õ
                                                                                                                       0
```

```
RESULT 5
AAS21491
                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                       δõ
                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
01-DEC-1999;
01-DEC-1999;
02-DEC-1999;
02-DEC-1999;
02-DEC-1999;
09-DEC-1999;
16-DEC-1999;
20-DEC-1999;
                                                                                                                           cartilage;
adipocyte;
                                                                                                                               Human secretory and transmembrane; PRO; mammalian; cancer; breast; prostate; cervical; tumour necrosis factor-alpha; cartilage; ear; proliferation; glucose; free fatty acid; si
                                                                   01-DEC-2000;
                                                                                07-JUN-2001.
                                                                                              WO200140466-A2
                                                                                                              Homo
                                                                                                                                                                              24-OCT-2001
                                                                                                                                                                                             AAS21491;
                                                                                                                                                                                                           AAS21491 standard; cDNA;
                                                                                                                                                                                                                                                 721
                                                                                                                                                                                                                                                               721
                                                                                                                                                                                                                                                                             661
                                                                                                                                                                                                                                                                                           661
                                                                                                                                                                                                                                                                                                          601
                                                                                                                                                                                                                                                                                                                        601
                                                                                                                                                                                                                                                                                                                                       541
                                                                                                                                                                                                                                                                                                                                                     541
                                                                                                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                                                                                                   481
                                                                                                                                                                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                             CAGGAGCAAAGCACAGGATCATAATAAATTTATGTACTTTATA 763
                                                                                                              sapiens
                                                                                                                                                                                                                                                                         CCACAGGTCCCCTTCTAGAATTCTGGACAGCATGAGATGGGTGTGCTGATGGGGGGCCCAG
                                                                                                                                                                                                                                                       CAGGAGCAAAGCACAGGATCATAATAAATTTATGTACTTTATA 763
                                                                                                                                                                                                                                                                                                                                                               AACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCGCTGCCCTGAGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                            CCTTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCTGATAAACC
                                                                                                                                                                                                                                                                                                                                                                                                                          AGAACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCACTGTCAGCTAATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cDNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGAACTGCGACTCAGCCCGGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGCTAATGGA
                                                                                                                           ear; proliferation; glu-
A-peptide; factor VIIA;
                                                                 2000WO-US32678
                                                                                                                                                                              (first
99WO-US28301.
99WO-US28531.
99WO-US28551.
99WO-US28564.
99WO-US28565.
99WO-US28565.
99WO-US30095.
99WO-US30911.
                                                                                                                                                              encoding
                                                                                                                                                                            entry)
                                                                                                                                                                                                           771
                                                                                                                                                               for PR01274
                                                                                                                                                              polypeptide
                                                                                                                                 skeletal
                                                                                                                                       ; lung;
TNF-alpha;
                                                                                                                               muscle;
                                                                                                                                                                                                                                                                                        720
                                                                                                                                                                                                                                                                                                       660
                                                                                                                                                                                                                                                                                                                     660
                                                                                                                                                                                                                                                                                                                                    600
                                                                                                                                                                                                                                                                                                                                                  600
                                                                                                                                                                                                                                                                                                                                                                 540
                                                                                                                                                                                                                                                                                                                                                                                             480
                                                                                                                                                                                                                                                                                                                                                                                                            480
                                                                                                                                                                                                                                                                                                                                                                                                                                         420
                                                                                                                                                                                                                                                                                                                                                                                                                          420
                                                                                                                                                                                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
```

99WO-US30999 99WO-US31243

```
Ş
                                                 밁
                                                                            Ş
                                                                                                            밁
                                                                                                                                  ρy
                                                                                                                                                                                                                                   AAS21244-AAS21518 encode for novel human secretory and transmembrane CC PRO polypeptides. The PRO polypeptides are useful to detect other CC PRO polypeptides, to link bloactive molecules to cells expressing CC PRO polypeptides, to modulate biological activities of cells expressing CC PRO polypeptides, and to detect the presence of mammalian lung, colon, CC breast, prostate, rectal, cervical or liver tumours by comparing PRO CC polypeptide expression in a cell sample to that in a control sample. CC Some of the 275 sequences are also useful to stimulate the release of tumour necrosis factor-alpha (TNF-alpha) from human blood, the CC proliferation or differentiation of chondrocytes, the proliferation or comparing promote control sample. CC of T-lymphocytes, the release of protoglycans from CC of T-lymphocytes, the release of a cytokine from peripheral blood CC monocytes (PBMCs), or the proliferation of endothelial cells or CC the PRO polypeptides may modulate glucose or free fatty acid uptake by CC skeletal muscle cells or by adipocytes; or inhibit binding of A-peptide colles involved in binding interactions. The polymoucleotides encoding CC prolypeptides can be used to generate probes, antisense RNA/DNA, cc transgenic or knock out animals and can be used in gene therapy.
                                                                                                                                                                     Query Match
Best Local Sim
Matches 761;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18 FEB-2000;
22-FEB-2000;
24 FEB-2000;
24 FEB-2000;
01-MAR-2000;
20-MAR-2000;
21-MAR-2000;
30-MAR-2000;
17-MAY-2000;
                                                                                                                                                                                                                               Sequence 771 BP; 169 A; 231 C; 195 G; 176 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Isolated, secretory and transmembrane PRO polypeptide used to detect other PRO polypeptides, link bioactive molecules to cells expressing PRO polypeptides, and detect the presence of mammalian tumours e.g.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Smith
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gerritsen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Baker KP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (GETH ) GENENTECH INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30-MAY-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11-FEB-2000;
18-FEB-2000;
                   121
                                                 61
                                                                              51
                                                                                                                                                                                     Local Similarity
                                                                                                                                          -
ACCTGATGCTGTGCCAGCCACACAAGAGATGTGGGGACAAGTTCTACGACCCCCTGCAGC
                                                                                                                         CTCCACTGCAACCCAGAGCCATGGCTCCCCGAGGCTGCATCGTAGCTGTCTTTGCCA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2001-408281/43.
DB; AAU12419.
                                                                                                       CTCCACTGCAACCACCCAGAGCCATGGCTCCCCGAGGCTGCATCGTAGCTGTCTTTGCCA
                                                                          TTTTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCCAGTGGCCCCCCATGACTCCTT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ۲,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Beresini M, Dec. ME, Goddard A, Goddard A, Goddard R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000WO-US07377.
2000WO-US07532.
2000WO-US08439.
2000WO-US13705.
                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2000WO-US04342.
2000WO-US04414.
2000WO-US04914.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000WO-US00277.
2000WO-US00376.
2000WO-US03565.
2000WO-US04341.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000WO-US14941.
2000WO-US15264.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000WO-US05004.
2000WO-US05601.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000WO-US30873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000WO-US14042
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    prostate,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    813pp;
                                                                                                                                                                                  99.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Deforge L, Desnoyers L, F
A, Godowski PJ, Gurney AL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cervical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     English.
                                                                                                                                                                                    Score 761; DB 22
Pred. No. 2e-214;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ď
                                                                                                                                                                       M1smatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Watanabe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CK,
                                                                                                                                                                                                  22;
                                                                                                                                                                       ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Wood WI,
                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Filvaroff E,
L, Sherwood S;
                                                                                                                                                                                                  771;
                                                                                                                                                                    0;
                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gao
                   180
                                                                                                          60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Σ
                                                                                                                                                                     0
```

```
Ş
                                        밁
                                                           Ş
                                                                                                 Qγ
                                                                                                                                         Qγ
                                                                                                                                                                                Ş
                                                                                                                                                                                                     밁
                                                                                                                                                                                                                        δõ
                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                             ğ
                                                                                                                                                                                                                                                                                                                                                                 DЪ
                                                                                                                                                                                                                                                                                                                                                                                    Š
   В
                                                                                밁
                                                                                                                        맑
                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                             241
                                         661
                                                             661
                                                                                601
                                                                                                    601
                                                                                                                        541
                                                                                                                                          541
                                                                                                                                                              481
                                                                                                                                                                                 481
                                                                                                                                                                                                     421
                                                                                                                                                                                                                                            361
                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                          241
   721
                     721
                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                          121
TGGCTGGGGAACCCTTCACCCTTCTGTGAGATTTTCCATCATCATCAAGTTCTCTCTATC
                                                            TGGCTGGGGAACCCTTCACCCTTCTGTGAGATTTTCCATCATCTCAAGTTCTCTTCTATC
                                                                               GGACTCTGAACCCTGATGACCCCTATGGCCAACATCAACCCGGCACCACCCCAAGGC
                                                                                         GGACTCTGAACCCTCCTGATGACCCSTATGGCCAACATCAACCCGGCACCACCCCAAGGC
                                                                                                                       CCACAGGTCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTGCTGATGGGGGCCCAG
                                                                                                                               CCACAGGTCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTGCTGATGGGGGCCCAG
                                                                                                                                                             AACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCCACCCTGCAGCTGCCCTGAGGAGGC
                                                                                                                                                                        AACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCGCTGCCCTGAGGAGGC
                                                                                                                                                                                                     AGAACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGCTAATGGA
                                                                                                                                                                                                                                                                                           AGAACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCACGTGTCAGCTAATGGA
                                                                                                                                                                                                                                                                                                                                                                 ACTGTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCCAGACGTGTGGAAACTGCA
                                                                                                                                                                                                                                                                                                                                                                                    ACTGTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCAGACGTGTGGAAACTGCA
                                                                                                                                                                                                                                                                                                                                                                                                         ACCTGATGCTGCCAGCCACACAGAGATGTGGGGGACAAGTTCTACGACCCCCTGCAGC
                    763
                                                                                                                                                                                                                                                                                                                                                                240
                                                            720
                                                                                                  660
                                                                                                                                                                               540
                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                         180
                                                                               660
                                                                                                                     600
                                                                                                                                         600
                                                                                                                                                            540
                                                                                                                                                                                                    480
                                                                                                                                                                                                                        480
                                                                                                                                                                                                                                          420
                                                                                                                                                                                                                                                              420
                                                                                                                                                                                                                                                                                  360
                                                                                                                                                                                                                                                                                                      360
                                                                                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                                             300
```

RESULT 6 AAC85962 KW PRO; PRO1081; PRO1074; PRO10272; proliferation; T-lymphocyte;
KW PRO; PRO1199; PRO1556; PRO4401; PRO10268; inhibition; stimulation;
KW PRO; PRO1556; PRO4401; PRO10268; inhibition; stimulation;
KW infiltration; mononuclear cell; eosinophil; erythema multiforme;
KW polymorphonuclear neutrophil; PMN; antibody; immune-related disorder;
KW systemic lupus erythematosus; rheumatoid arthritis; osteoarthritis;
MV ivenile chronic arthritis; spondyloarthropathy; systemic sclerosis;
MV idiopathic infiammatory myopathy; Sjogren's syndrome; skin disease;
MV systemic vasculitis; sarcoidosis; autoimmune haemolytic anaemia; asthma;
MV autoimmune thrombocytopaenia; thyroiditis; diabetes mellitus; allergy;
MV immune-mediated renal disease; demyelination; central nervous system;
MV peripheral nervous system; idiopathic demyelinating polyneuropathy;
MV peripheral nervous system; idiopathic demyelinating polyneuropathy;
MV dillain Barre syndrome; hepatobiliary disease; eosinophilic pneumonia;
MV chronic active hepatitis; sclerosing cholangitis; food hypersensitivity;
MV dillain Barre syndrome; hepatobiliary clarhosis; contact dermatitis;
MV granulomatory bowel disease; idiopathic pulmonary fibrosis; contact dermatitis;
MV whipple's disease; idiopathic pulmonary fibrosis; contact dermatitis;
MV porlasis; atopic dermatitis; hypersensitivity pneumonitis;
MV porlasis; atopic dermatitis; hypersensitivity pneumonitis; AAC85962 standard; Native sequence of PRO1274 cDNA, clone DNA64889-1541. rejection; (first entry) CDNA; 771 ВP

Homo sapiens

```
CC The sequences given in AAC85961-69 encode PRO polypeptides. PRO1081, CC PRO1274 and PRO10272 stimulate the proliferation of T-lymphocytes and CC PRO1199, PRO1556, PRO4401 and PRO10268 inhibit the proliferation of CC mononuclear cells, eosinophils or polymorphonuclear neutrophils (PMN) CC into the tissue of a mammal. The PRO CDNA's and antibodies which CC bind to them, are used to treat an immune-related disorder in a CC mammal. Such disorders include systemic lupus erythematosus, rheumatoid arthritis, osteoarthritis, juvenile chronic arthritis, a CC spondyloarthropathy, systemic sclerosis, an idiopathic inflammatory CC myopathy. Sjogren's syndrome, systemic vasculitis, sarcoidosis, autoimmune haemolytic anaemia, autoimmune thrombocytopaenia, thyroiditis, disbetes mellitus, immune-mediated renal disease, a demyelinating CC diabetes mellitus, immune-mediated renal disease, a demyelinating CC disease of the central or peripheral nervous system, idiopathic CC disease of the central or peripheral nervous system, idiopathic CC disease, granulomatous hepatitis, sclerosing cholangitis, informatory bowel disease, julien-sensitive enteropathy, whipple's CC cirriosis, granulomatous hepatitis, sclerosing cholangitis, an olisease, arythema multiforme, contact dermatitis, psoriasis, an information disease, as the sense of the lung, contact dermatitis, psoriasis, an information associated disease, graft rejection or cc graft-versus-host disease, an immunologic disease of the lung, cc graft-versus-host disease, and immunologic disease, graft rejection or cc.
Query Match
Best Local S
Matches 761
                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Isolated
disorder
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         09-DEC-1999;
23-DEC-1999;
11-JAN-2000;
20-JAN-2000;
18-FEB-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Fong
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 2; Fig 3; 124pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2001-381384/40.
P-PSDB; AAB47292.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tumas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (GETH )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200140465-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              03-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30-MAY-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENENTECH INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRO polypeptide useful for treat e.g. arthritis, asthma, allergy,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Goddard A, Go
Watanabe CK,
                                                      BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000WO-US14941.
2000US-0209832.
2000WO-US23328.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000US-0175481.
2000US-0177118.
2000WO-US04342.
2000US-0187202.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2000WO-US30873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      990S-0170262
990S-0172059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99WO-US28313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /*tag= a
/product=
24..95
/*tag= b
96..353
                                                      169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
24..356
            99.78;
99.78;
                                                    Α;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Godowski PJ,
K, Wood WI,
                                                      231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "PRO1274 polypeptide"
                                                    Ç
      Score 761; DB 22
Pred. No. 2e-214;
                                                195 G; 176 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Zhang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Grimaldi CJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   or diagnose
diabetes or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gurney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 an immune-related psoriasis -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ΑL,
                                                                                                                                                                                                                                                                                 thyroiditis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hillan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Z
```

Local Similarity nes 761; Conserv

Conservative

1;

Mismatches

Indels

0;

Gaps

0

22;

Length 771;

```
ARESULT 7
AAF54298
ID AAF5
XX AAF5
AC AAF5
XC DAAF5
DT 02-A
DE DNA
XX Secr
XX Secr
XX Unid
XX Unid
PN W020
XX W020
XX W020
XX XX W18-F
                                                                                                                                                                                                        밁
                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                          Q
                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                               먉
                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δõ
      18-FEB-2000; 2000WO-US04342.
                           28-DEC-2000
                                            WO200078961-A1
                                                              Unidentified
                                                                               Secreted; transmembrane; gene
                                                                                                 DNA encoding protein of the invention
                                                                                                                    02-APR-2001
                                                                                                                                       AAF54298;
                                                                                                                                                       AAF54298 standard; DNA; 771
                                                                                                                                                                                                        721
                                                                                                                                                                                                                        721
                                                                                                                                                                                                                                          661
                                                                                                                                                                                                                                                             661
                                                                                                                                                                                                                                                                               109
                                                                                                                                                                                                                                                                                                 601
                                                                                                                                                                                                                                                                                                                 541
                                                                                                                                                                                                                                                                                                                                   541
                                                                                                                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                                                                                                       481
                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                      CAGGAGCAAAGCACAGGATCATAATAAATTTATGTACTTTATA 763
                                                                                                                                                                                                                                                                                                             CCACAGGTCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTGCTGATGGGGGCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                  CCTTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCTGATAAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACTGTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCAGACGTGTGGAAACTGCA
                                                                                                                                                                                                                                                                          GACTCTGAACCCTCCTGATGACCCCTATGGCCAACATCAACCCGGCACCACCCAAGGC
                                                                                                                                                                                                                                                                                     GGACTCTGAACCCTCCTGATGACCCSTATGGCCAACATCAACCCGGCACCACCCCCAAGGC
                                                                                                                                                                                                                                                                                                                                                                                               AGAACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGCTAATGGA
                                                                                                                                                                                                    CAGGAGCAAAGCACAGGATCATAATAAATTTATGTACTTTATA 763
                                                                                                                                                                                                                                                                                                                                                 AACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCCACCCTGCAGCTGCCCTGAGGAGGC
                                                                                                                                                                                                                                                                                                                                                             AACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCGCTGCCCTGAGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                     AGAACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGCTAATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTTTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCATGACTCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTCCACTGCAACCACCCAGAGCCATGGCTCCCCGAGGCTGCATCGTAGCTGTCTTTGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCTGATGCTGTGCCAGCCACACAAGAGATGTGGGGACAAGTTCTACGACCCCCTGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTTTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCATGACTCCTT
                                                                                                                   (first entry)
                                                                             therapy;
                                                                                                 #41.
                                                                                                                                                                                                                                                         720
                                                                                                                                                                                                                                        720
                                                                                                                                                                                                                                                                           660
                                                                                                                                                                                                                                                                                            660
                                                                                                                                                                                                                                                                                                              600
                                                                                                                                                                                                                                                                                                                                600
                                                                                                                                                                                                                                                                                                                                                 540
                                                                                                                                                                                                                                                                                                                                                                   540
                                                                                                                                                                                                                                                                                                                                                                                       480
                                                                                                                                                                                                                                                                                                                                                                                                        480
                                                                                                                                                                                                                                                                                                                                                                                                                          420
                                                                                                                                                                                                                                                                                                                                                                                                                                            420
                                                                                                                                                                                                                                                                                                                                                                                                                                                              360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60
```

```
밁
                                              Ş
                                                                       밁
                                                                                            õ
                                                                                                                    밁
                                                                                                                                          Š
                                                                                                                                                                   밁
                                                                                                                                                                                      Ş
                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ₽
                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23-JUN-1999;
20-JUL-1999;
26-JUL-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gao W,
Pan J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The present invention relates to secreted and transmembrane proteins. These proteins and the DNA encoding them may be used as hybridization probes, in chromosome and gene mapping and in the generation of anti-sense RNA and DNA. They may also be used used to generate either transgenic animals or knockout animals which are in turn useful for development and screening of therapeutically useful reagents. The nucleic acids may also be used in gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Secreted and transmembrane proteins and nucleic acids designated PRO, useful as hybridization probes, in chromosome and gene mapping and gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2001-071395/08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30-NOV-1999;
02-DEC-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-SEP-1999;
29-OCT-1999;
                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (GETH ) GENENTECH INC
   481
                                                 421
                                                                        361
                                                                                              361
                                                                                                                     301
                                                                                                                                             301
                                                                                                                                                                   241
                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16-DEC-1999;
                         421
                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                            CCTTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCTGATAAACC
                                                                                                                                                                                                                                                                                                                                                      AACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCGCTGCCCTGAGGAGGC
                       ACATCAGGGGAACGATGACTCCTGGATTCTCCTTGGTGGGCCTGGAGAAAGAGGGCT
                                                                                                                   CCTTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCTGATAAACC
                                                                                                                                                                                                                          ACTGTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCAGACGTGTGGAAACTGCA
                                                                                                                                                                                                                                                                         ACCTGATGCTGTGCCAGCCACACAGAGATGTGGGGGACAAGTTCTACGACCCCCTGCAGC
                                                                                                                                                                                                                                                                                                                      TTTTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCATGACTCCTT 120
                                                                                                                                                                                                                                                                                                                                                                             CTCCACTGCAACCACCCAGAGCCATGGCTCCCCGAGGCTGCATCGTAGCTGTCTTTGCCA 60
                                                                                AGAACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGCTAATGGA 360
                                                                                                                                                                                                                                                           ACCTGATGCTGTGCCAGCCACAAGAGATGTGGGGGACAAGTTCTACGACCCCCTGCAGC
                                                                                                                                                                                                                                                                                                          TTTTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCATGACTCCTT
                                                                                                                                                                                                              ACTGTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCAGACGTGTGGAAACTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ϋ́
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Goddard A, Godowsk:
Paoni NF, Roy MA,
De CK, Williams PM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Fig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Goddard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Botstein
                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99US-0162506
99WO-US28313
99WO-US28551
99WO-US30095
2000WO-US30095
2000WO-US00219
2000WO-US00376
                                                                                                                                                                                                                                                                                                                                                                                                                                                    BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      81;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99US-0141037.
99US-0144758.
99US-0145698.
99WO-US20111.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    169 A; 231 C; 195 G; 176 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     787pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     D, Desnoyers
Godowski PJ,
                                                                                                                                                                                                                                                                                                                                                                                                                  99.78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               noyers L, Eaton DL,
i PJ, Grimaldi CJ, G
Smith V, Stewart TA,
Wood WI;
                                                                                                                                                                                                                                                                                                                                                                                                                 Score 761; DB 22
Pred. No. 2e-214;
                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                             22;
                                                                                                                                                                                                                                                                                                                                                                                                      ۲,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gurney AL,
TA, Tumas D;
                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                             771;
                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hillan
                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S;
                                                                                             420
540
                       480
                                              480
                                                                     420
                                                                                                                    360
                                                                                                                                                                                        300
                                                                                                                                                                                                              240
                                                                                                                                                                                                                                     240
                                                                                                                                                                                                                                                           180
                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                          120
                                                                                                                                                                 300
                                                                                                                                                                                                                                                                                                                                                                                                      0,
```

Sequence

914 used

BP;

193

Ą

265

Ç

237

<u>ი</u>

Η.

metastasised. The present sequence represents in the exemplification of the present invention

present invention

```
RESULT 8
AAA08111
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                  A method has been developed for detecting, diagnosing metastasis, CC staging and monitoring the onset of metastasis or a change in stage of bladder cancer, by measuring bladder specific gene (BSG) levels in CC cells, tissues or body fluids. An increase in BSG levels compared to normal human control is associated with the presence or progression of bladder cancer, a decrease is associated with cancer regression. The method comprising measuring BSG is useful for detecting, diagnosing measuring staging and monitoring the onset of metastasis or a change in stage of bladder cancer. An antibody against BSG (I) labeled with cancer and (I) especially conjugated to a cytotoxic agent is useful for treating bladder cancer. The method is efficient in discriminating between bladder cancer which has metastasised and the bladder cancer which has metastasised and the bladder cancer which has metastasised and the bladder cancer.
                                                                                                                                                                                                                                                                     Detecting, diagnosing metastasis, treating bladder cancer, involves levels in cells or body fluids -
                                                                                                                                                                                                                                              Claim 6;
                                                                                                                                                                                                                                                                                                                               WPI; 2000-256658/22.
                                                                                                                                                                                                                                                                                                                                                           Salceda S,
                                                                                                                                                                                                                                                                                                                                                                                                                02-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                           01-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human; bladder specific gene; BSG; bladder cancer; detection; metastasis; cytostatic; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human bladder
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAA08111;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAA08111 standard;
                                                                                                                                                                                                                                                                                                                                                                                     (DIAD-) DIADEXUS LLC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      09-MAR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200012761-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGGAGCAAAGCACAGGATCATAATAAATTTATGTACTTTATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGACTCTGAACCCTCCTGATGACCCSTATGGCCAACATCAACCCGGCACCACCCCAAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCACAGGTCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTGCTGATGGGGGCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGGAGCAAAGCACAGGATCATAATAAATTTATGTACTTTATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGGCTGGGGAACCCTTCACCCTTCTGTGAGATTTTCCATCATCTCAAGTTCTCTTCTATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGACTCTGAACCCTCCTGATGACCCCTATGGCCAACATCAACCCGGCACCACCCCAAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCACAGGTCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTGCTGATGGGGGCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGGCTGGGGAACCCTTCACCCTTCTGTGAGATTTTCCATCATCTCAAGTTCTCTTCTATC
                                                                                                                                                                                                                                              Page
                                                                                                                                                                                                                                                                                                                                                         Sun Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                              25-26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             specific
                                                                                                                                                                                                                                                                                                                                                                                                                9805-0098825
                                                                                                                                                                                                                                                                                                                                                                                                                                           99WO-US20003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA;
                                                                                                                                                                                                                                                                                                                                                         Recipon
                                                                                                                                                                                                                                            31pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              914
                                                                                                                                                                                                                                                                                                                                                         Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             22638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ВP
                                                                                                                                                                                                                                                                                                                                                         Cafferkey
                                                                                                                                                                                                                                                                                    staging, m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             clone 819141H
                                                                                                                                                                                                                                                                                    monitoring, imaging and g bladder specific gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  diagnosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NO:1.
                                                                                                                                                                                                                                                                                    (BSG)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      720
```

Query Match Best Local Similarity

99.7**%**; 99.7**%**;

Score 761; Pred. No. 2

DB 21; 2e-214;

Length

Ħ

```
RESULT 9
AAZ24 20
XX AAZ2
XX AAZ2
XX AAZ2
XX AAZ2
XX Huma
XX Expr
KW Hrea
XX Homo
XX Homo
XX Homo
XX DE19
                                                                                                                                                                                              Qy
                                                                                                                                                용
                                                                                                                                                              δÃ
                                                                                                                                                                               B
                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                B
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
DE19818619-A1
                             Expressed sequence tag; human; bladder; tumour;
treatment; gene therapy; EST; ss.
                                                       Human bladder
                                                                       14-FEB-2000
                                                                                                                                                 . 753
                                                                                                       AAZ24391 standard;
                                                                                                                                                                                               661
                                                                                                                                                                                                                 633
                                                                                                                                                               721
                                                                                                                                                                                                                                 601
                                                                                                                                                                                                                                                                541
                                                                                                                                                                                                                                                 573
                                                                                                                                                                                                                                                                                 513
                                                                                                                                                                                                                                                                                                 481
                                                                                                                                                                                                                                                                                                                453
                                                                                                                                                                                                                                                                                                                                421
                                                                                                                                                                                                                                                                                                                                                393
                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                333
                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                273
                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                                213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ü
                                                                                                                                            CCACAGGTCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTGCTGATGGGGGGCCCAG
                                                                                                                                                                                                                     GGACTCTGAACCCTCCTGATGACCCSTATGGCCAACATCAACCCGGCACCACCCCAAGGC
                                                                                                                                                                                                                                                                            AACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCGCTGCCCTGAGGAGGC
                                                                                                                                                                                                                                                                                                            GGACTCTGAACCCTGATGACCCCTATGGCCAACATCAACCCGGCACCACCCCAAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTTTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCATGACTCCTT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGAACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGCTAÀTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                      CCTTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCTGATAAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                           ACTGTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCAGACGTGTGGGAAACTGCA 240.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCTGATGCTGTGCCAGCCACAAGAGATGTGGGGACAAGTTCTACGACCCCTGCAGC
                                                                                                                                                                                                                                                                                                                                                                             AGAACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGCTAATGGA
                                                                                                                                                                                                                                                                                                                                                                                                              CCTTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCTGATAAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              761;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                       (first entry
                                                     tumour cDNA library derived EST
                                                                                                      CDNA;
                                                                                                      ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                              763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                            752
                                                                                                                                                                                             720
                                                                                                                                                                                                             692
                                                                                                                                                                                                                             660
                                                                                                                                                                                                                                              632
                                                                                                                                                                                                                                                                                                                             480
                                                                                                                                                                                                                                                              600
                                                                                                                                                                                                                                                                             572
                                                                                                                                                                                                                                                                                             540
                                                                                                                                                                                                                                                                                                            512
                                                                                                                                                                                                                                                                                                                                                             420
                                                                                                                                                                                                                                                                                                                                            452
                                                                                                                                                                                                                                                                                                                                                                             392
                                                                                                                                                                                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                                                                                                                            332
                                                                                                                                                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
```

```
This invention describes novel polypeptide fragments (I) and the polypuccheotides (II) that encode them that are highly expressed in a chuman bladder tumour and which have cytostatic activity, (II) are used for recombinant expression of (I) and to isolate complete genes. (I) are used to identify agents suitable for treatment of bladder cancer, to care therapy vectors) or are used in a preparation for cancer treatment. (I) consider the generation of specific antibodies. (II) are conditionable for the generation of specific antibodies. (II) are conditified by assembling ESTs (expressed sequence tags) from a conditional still are considered by assembling ESTs (expressed sequence tags) from a conditional still are considered with the fact that considered therefore reduces the number of failures associated with the fact that considered constant of interest associated with the fact that considered in the same of the same of the same of the same of the same and the considered constant of the same considered constant of the same considered in a social social
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New nucleic acid sequences expressed in bladder tumor tissue, and derived polypeptides, for treatment of bladder tumor and identification of therapeutic agents
Sequence 762 BP; 162 A; 232 C; 194 G; 174 T; 0 other;
                                                                      the proteins represented in AAY66143-Y66198.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 3; Page 62; 132pp; German
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Rosenthal A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28-OCT-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (META-) METAGEN GES GENOMFORSCHUNG MBH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1999-612028/53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Specht T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          98DE-1018619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         98DE-1018619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hinzmann B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Schmitt A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pilarsky
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Dahl
```

```
Ϋ́
                     망
                                     QY
                                                             밁
                                                                                                     밁
                                                                                                                      Ş
                                                                                                                                             밁
                                                                                                                                                                Š
                                                                                                                                                                                                       QΥ
                                                                                                                                                                                                                              멍
                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 760
                      361
                                        361
                                                             301
                                                                                 301
                                                                                                     241
                                                                                                                        241
                                                                                                                                             181
                                                                                                                                                                                     121
                                                                                                                                                                                                         121
                                                                                                                                                                 181
                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                  CCTTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAGAGCTGATAAACC
                                                                                                                                                                                ACCTGATGCTGTGCCAGCCACAAGAGATGTGGGGACAAGTTCTACGACCCCCTGCAGC
                                                                                                                                                                                                                                    TTTTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCCATGACTCCTT
AGAACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGCTAATGGA
                                                                                                                                                    ACTGTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCAGACGTGTGGAAACTGCA
                                                                                                                                                                                                                          TTTTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCATGACTCCTT
                                                          AGAACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGCTAATGGA
                                                                                                  CCTTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCTGATAAACC
                                                                                                                                          ACTGTTGCTATGATGATGCCGTCGTGCCCCTTGGCCAGGACCCAGACGTGTGGAAACTGCA
                                                                                                                                                                                                                                                                                                               760;
                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                      99.78;
                                                                                                                                                                                                                                                                                                             1;
                                                                                                                                                                                                                                                                                                            Score 760.6; DB 20; Length Pred. No. 2.6e-214; 1; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                           Gaps
480
                                      420
                   420
                                                          360
                                                                               360
                                                                                                  300
                                                                                                                                          240
                                                                                                                                                                                  180
                                                                                                                                                                                                                           120
                                                                                                                                                                                                                                                                                                            0
```

```
RESULT 10
AAZ98158
ID AAZ98
                                                                                                                                                                                              26-JUN-1998;
31-JUL-1998;
01-OCT-1998;
11-DEC-1998;
                                                                                                                                Lal P, T
Akerblom
      Claim 9;
                             New human signal peptide-containing proteins useful in treatment, prevention and diagnosis of e.g. cancer, inflammation and cardiovascular disease .
                                                                                WPI; 2000-160673/14.
P-PSDB; AAY87273.
                                                                                                                                                                                                                                                                                                                                                                                 Human; signal peptide-containing protein; HSPP; diagnosis; cancer; inflammation; cardiovascular disease; anticancer; anti-inflammatory; antimicrobial; nootropic; neuroprotective; cardiovascular; hepatotropic; antimicrobial; nootropic; neuroprotective; cardiovascular; hepatotropic; antiasthmatic; gene therapy; cell proliferation; neurological disorder; reproductive disorder; developmental disorder; arteriosclerosis; cirrhosis; psoriasis; acquired immune deficiency syndrome; anaemia; asthma; Crohn's disease; infection; Alzheimer's disease; schizophrenia;
                                                                                                                   Bandman O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human signal peptide containing protein HSPP-50 cDNA SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAZ98158 standard; cDNA; 748
                                                                                                                                                                      (INCY-) INCYTE
                                                                                                                                                                                                                                                             25-JUN-1999;
                                                                                                                                                                                                                                                                                    06-JAN-2000
                                                                                                                                                                                                                                                                                                              WO200000610-A2
                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                           Parkinson's disease; Huntington's diseases; ovulatory defect;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAGGAGCAAAGCACAGGATCATAATAAATTTATGTACTTTA 761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCACAGGTCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTGCTGATGGGGGCCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCACAGGTCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTGCTGATGGGGGCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGGCTGGGGAACCCTTCACCCTTCTGTGAGATTTTCCATCATCTCAAGTTCTCTTCTATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGACTCTGAACCCTCCTGATGACCCCTATGGCCAACATCAACCCGGCACCACCCCAAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGACTCTGAACCCTCCTGATGACCCSTATGGCCAACATCAACCCGGCACCACCCCAAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGGCTGGGGAACCCTTCACCCTTCTGTGAGATTTTCCATCATCTCAAGTTCTCTTCTATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCCACCCTGCCGCTGCCCTGAGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tang
om IE,
      Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                               YT, Gorgone Au-Young J,
                                                                                                                                                                                             98US-0090762.
98US-0094983.
98US-0102686.
98US-0112129.
                                                                                                                                                                     PHARM INC
                                                                                                                                                                                                                                                           99WO-US14484.
                                                                                                                        y GA,
Yue
     English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ВP
                                                                                                                               Corley NC, Guegler KJ, H, Patterson C, Reddy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    761
                                                                                                                               Baughn MR;
R, Hillman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NO:184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    660
ğ
                             g
                                                 Ş
                                                                              밁
                                                                                                   Ş
                                                                                                                             밁
                                                                                                                                                    δÃ
                                                                                                                                                                              Ъ
                                                                                                                                                                                                     S
                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                        γ
                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                           QΥ
                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                     뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
   606
                           541
                                                   546
                                                                              481
                                                                                                      486
                                                                                                                               421
                                                                                                                                                       426
                                                                                                                                                                                361
                                                                                                                                                                                                        366
                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                         306
                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                          246
                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ш
```

AAZ98109 to AAZ98242 encode AAY87224 to AAY87357 which represent the human signal peptide-containing proteins HSPP-1 to HSPP-134. HSPPs have

밁

601

CTGAACCCTCCTGATGACCCSTATGGCCAACATCAACCCGGCACCACCCCAAGGCTGGCT

665 600 605 540 545 480 485 420 425

CCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCGCTGCCCTGAGGAGGCCCACA

CCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCAGCTGCCCTGAGGAGGCCCACA

AGGGGAACGATGACTCCTGGATTCTCCTTCCTGGGTGGGCCTGGAGAAAGAGGCTGGTGT 

AGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCTGATAAACCAGAAC

305

TGCGACTCAGCCCGGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGCTAATGGAACATC

360

365 300

```
be used in gene therapy. HSPPs can be used to treat or prevent disorders CC associated with decreased activity or function of HSPP. Antagonists of CC HSPP are used to treat or prevent disorders associated with increased activity or function of HSPP. Such diseases include cell proliferation (Including cancer) inflammation, cardiovascular, neurological, CC reproductive or developmental disorders; (e.g. arteriosclerosis, acquired immune deficiency syndrome, anaemia, CC irchosis, psoriasis, acquired immune deficiency syndrome, anaemia, CC asthma, Crohn's disease, microbial or other infections, congestive or CC ischaemic heart disease, Alzhelmer's, Parkinson's or Huntington's CC diseases, schizophrenia, ovulatory defects, muscular dystrophy). HSPP nucleic acids can be used for the recombinant production of HSPP, for CC diseases, schizophrenia, ovulatory defects, muscular dystrophy). HSPP CC diagnosis and monitoring), in gene therapy, as antisease, (for CC diagnosis and monitoring), in gene therapy, as antisease, critiplex forming or ribozyme therapeutics, for detecting related sequences or genetic variations, and for chromosomal mapping. HSPP are also used to CC antagonists (potential therapeutic agents), ab are used to diagnose, or monitor, HSPP related diseases (in usual immunoassays), as therapeutic antagonists, in competitive drug screens, and for purification of HSPP CC from natural sources.
     Sequence 748 BP; 159 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          neuroprotective, cardiovascular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            anti-inflammatory,
227 C;
          193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          antimicrobial, nootropic, hepatotropic, r and antiasthmatic activities, and can
     G; 169 T; 0
     other;
                                                                                                                                                                                                                                                                                                                                                                      related sequences P are also used to
```

ş 밁 Š 밁 Ş

밁

Š

밁 Š 밁

밁

```
Matches
                            186
                                                     121
                                                                                126
                                                                                                          61
                                                                                                                                   99
                                                                                                                                                                                      σ
                                                                                                                                                                        CTGCAACCCAGAGCCATGCCTCCCCGAGGCTGCATCGTAGCTGTCTTTTGCCATTTTC
TGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCAGACGTGTGGAAACTGCACCTTC
                                                   ATGCTGTGCCAGCCACACAGAGATGTGGGGGACAAGTTCTACGACCCCCTGCAGCACTGT
                                                                                                        TGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCCAGTGGCCCCCATGACTCCTTACCTG
                                                                                                                     TGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCCAGTGGCCCCCCATGACTCCTTACCTG
                                                                                                                                                            CTGCAACCACCCAGAGCCATGGCTCCCCGAGGCTGCATCGTAGCTGTCTTTGCCATTTTC
                                                                                                                                                                                                                 746;
                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                            96.3%;
                                                                                                                                                                                                               Score 735; DB 21;
Pred. No. 9.3e-207;
1; Mismatches 1;
                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                ب
۲۰
                                                                                                                                                                                                                Gaps
                                                                             185
                                                                                                                                 125
                                                                                                                                                                                      65
 240
                          245
                                                   180
                                                                                                       120
                                                                                                                                                            60
```

Š

```
δÃ
                                                                 밁
                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                       Matches 416; Conserv
                                                                                                                                                                                              Sequences AAX01683-85 represent overlapping clones specific for urinary tract tissue library BL172. The BL172 polynucleotides are used to detect target BL172 polynucleotides and BL172 mnNA and the BL172 polypeptides are used to detect BL172 antiyens/antibodies in a test sample. The presence of urinary tract disease, especially cancer. Additionally, the polypeptides are used to detect antibodies that bind specifically to a recombinant expression vector comprising the BL172 polynucleotide are used to detect antibodies that bind specifically to a recombinant expression vector comprising the BL172 polynucleotide sequences are used to produce the polypeptides containing a sequence are used to produce the polypeptides containing BL172 prognostication, in vivo imaging, prevention and treatment of diseases or conditions associated with BL172, especially urinary tract cancer.
                                                                                                                                                                           Sequence 417 BP; 99 A; 108 C; 117 G; 93 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                              Claim 1; Page 89; 114pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                         New purified polynucleotide BL172 derivatives and encoded polypeptides - useful in the identification of markers, windicative of urinary tract diseases or conditions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 1999-045802/04.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Roberts-Rapp L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Billing-medel PA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         05-JUN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Urinary tract tissue library BL172 gene specific cDNA clone g2178680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (ABBO ) ABBOTT LAB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    05-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BL172; urinary tract;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAX01685 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21-APR-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAX01685
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             726
                                                                        CTGGAGAAAGAGGCTGGTGTTACCTGAGATCTGGGATGCTGAGTGGCTGTTTGGGGGGCCA
                  CTGGAGAAAGAGGCTGGTGTTACCTGAGATCTGGGATGCTGAGTGGCTGTTTTGGGGGCCA 465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCAAAGCACAGGATCATAATAAATTATG 754
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGGGAACCCTTCACCCTTCTGTGAGATTTTCCATCATCTCAAGTTCTCTTCTATCCAGGA 725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCAAAGCACAGGATCATAATAAATTTATG 748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -GGGAACCCTTCACCCTTCTGTGAGATTTTCCATCATCTCAAGTTCTCTTCTATCCAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Granadosen,
                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      97US-0869579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    98WO-US11693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Russell JC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cohen M, Co
                                                                                                                                  54.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      marker;
                                                                                                                 Score 416.6; DB 20
Pred. No. 6.6e-113;
1; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ВÞ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Colpitts TL,
es SC, Klass
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Stroupe SD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cancer; recombinant; human; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Yu H;
                                                                                                                                            DB 20; Length 417,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Friedman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Kratochvil JD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          which
                                                                                                                   0,
                                                                                                                Gaps
                                                         358
                                                                                                                0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                Sequences AAX01683-85 represent overlapping clones specific for urinary tract tissue library BL172. The BL172 polynucleotides are used to detect target BL172 polynucleotides and BL172 mRNA and the BL172 polypeptides are used to detect BL172 antigens/antibodies in a test sample. The identification of certain markers in these methods are indicative of the presence of urinary tract disease, especially cancer. Additionally, the polypeptides are used to detect antibodies that bind specifically to a BL172 epitope derived from a BL172 polypeptide. Host cells containing a recombinant expression vector comprising the BL172 polynucleotide sequences are used to produce the polypeptides containing BL172 epitopes. The methods aid in diagnosis, detection, staging, monitoring, prognostication, in vivo imaging, prevention and treatment of diseases or conditions associated with BL172, especially urinary tract cancer.
                                                                                                                                                                                                                                                                                 New purified polynucleotide BL172 derivatives and encoded polypeptides - useful in the identification of markers, which indicative of urinary tract diseases or conditions
                                                                                                                                                                                                                                                    Claim 1; Page 89; 114pp; English.
                                                                                                                                                                                                                                                                                                                                                     WPI; 1999-045802/04.
                                                                                                                                                                                                                                                                                                                                                                                                                   Billing-medel PA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  W09855656-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BL172; urinary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Urinary tract tissue library BL172 gene specific cDNA clone 2624118
                                                                                                                                                                                                                                                                                                                                                                                                                                                     (ABBO ) ABBOTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     05-JUN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   05-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAX01684 standard; DNA; 236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTGCCCTGAGGAGGCCCACAGGTCCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGAAACACACACTCAACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAGTTCTCTTCTATCCAGGAGCAAAGCACAGGATCATAATAAATTTATGTACTTTAT 762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCACCACCCCAAGGCTGGCTGGGGAACCCTTCACCCTTCTGTGAGATTTTCCATCATCATCTC 705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGATGGGGGCCCAGGGACTCTGAACCCTCCTGATGACCCSTATGGCCAACATCAACCCG 645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAGAAACACACTCAACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCCACCCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAGTTCTCTTCTATCCAGGAGCAAAGCACAGGATCATAATAAATTTATGTACTTTAT 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCACCACCCCAAGGCTGGCTGGGGAACCCCTTCACCCTTCTGTGAGATTTTCCATCATCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTGATGGGGGCCCAGGGACTCTGAACCCTCCTGATGACCCCTATGGCCAACATCAACCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTGCCCTGAGGAGGCCCACAGGTCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTG
                                                                                                                                                                                                                                                                                                                                                                                                    Granadosen,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                  PA, Cohen M, Conadosen, Hodges of Russell JC, St
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     97US-0869579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tract;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98WO-US11693.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               marker;
                                                                                                                                                                                                                                                                                                                                                                                Colpitts TL, lges SC, Klass N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cancer;
                                                                                                                                                                                                                                                                                                                                                                              MR,
Yu
                                                                                                                                                                                                                                                                                                                                                                                                              Friedman
                                                                                                                                                                                                                                                                                                                                                                                                 Kratochv11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       238
```

Sequence 236 BP; 49

A

69 C;

62 G;

56 T; 0 other;

Local Similarity

30.9%;

Score 236; DB 20; Pred. No. 1e-59;

Length 236;

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local s
Matches 236
                  Sequences AAX01683-85 represent overlapping clones specific for urinary tract tissue library BL172. The BL172 polynucleotides are used to detect target BL172 polynucleotides and BL172 mRNA and the BL172 polypeptides are used to detect BL172 antigens/antibodies in test sample. The identification of certain markers in these methods are indicative of the presence of urinary tract disease, especially cancer. Additionally, the polypeptides are used to detect antibodies that bind specifically to a BL172 epitope derived from a BL172 polypeptide. Host cells containing a recombinant expression vector comprising the BL172 polynucleotide sequences are used to produce the polypeptides containing BL172 epitopes. The methods aid in diagnosis, detection, staging, monitoring, prognostication, in vivo imaging, prevention and treatment of diseases or conditions associated with BL172, especially urinary tract cancer.
                                                                                                                                                                                                                                 Claim 1; Page 89; 114pp;
                                                                                                                                                                                                                                                              New purified polynucleotide BL172 derivatives and encoded polypeptides - useful in the identification of markers, windicative of urinary tract diseases or conditions
                                                                                                                                                                                                                                                                                                                                                     Gordon J, Granadosen, Hodg
Roberts-Rapp L, Russell JC,
                                                                                                                                                                                                                                                                                                                                                                      Billing-medel PA,
Gordon J, Granado
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BL172; urinary
                                                                                                                                                                                                                                                                                                                           WPI; 1999-045802/04.
                                                                                                                                                                                                                                                                                                                                                                                                                 (ABBO ) ABBOTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          05-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10-DEC-1998.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO9855656-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Urinary tract tissue library BL172 gene specific cDNA clone 1554838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAX01683 standard; DNA; 196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   162 TTCTACGACCCCTGCAGCACTGTTGCTATGATGACGTCGTGCCCTTGGCCAGGACC 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAGACGTGTGGAAACTGCACCTTCAGAGTCTGCTTTGAGCAGTGCTGCCCCCTGGACCTTC 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATGGTGAAGCTGATAAACCAGAACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATGGTGAAGCTGATAAACCAGAACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGT 341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 236;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tract; marker; cancer; recombinant; human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          98WO-US11693
                                                                                                                                                                                                                                                                                                                                                                                 Cohen M,
                                                                                                                                                                                                                                                                                                                                                                   n M, Colpitts TL,
Hodges SC, Klass
                                                                                                                                                                                                                                   English.
                                                                                                                                                                                                                                                           diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                     Stroupe SD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                     MR, Kı
Yu H;
                                                                                                                                                                                                                                                                                                                                                                                  Friedman
                                                                                                                                                                                                                                                                                                                                                                   Kratochvil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                            which
                                                                                                                                                                                                                                                                                                                                                                    ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

Sequence 196 BP;

38

A.

70 C;

44

હ

44 T;

0 other;

```
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches 196;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
The invention relates to isolated polynucleotide (I) and polypeptide (II) sequences. (I). is useful as hybridisation probes, polymerase chain reaction (PCR) primers, oligomers, and for chromosome and gene mapping, and in recombinant production of (II). The polynucleotides are also used in diagnostics as expressed sequence tags for identifying expressed genes. (I) is useful in gene therapy techniques to restore normal activity of (II) or to treat disease states involving (II). (II) is useful for generating antibodies against it, detecting or quantitating a polypeptide in tissue, as molecular weight markers and as a food supplement. (II) and its binding partners are useful in medical inaging of sites expressing (II). (I) and (II) are useful for treating disorders involving aberrant protein expression or biological activity. The polypeptide and polynucleotide sequences have applications in diagnostics, forensics, gene mapping, identification of mutations
                                                                                                                                                                                                                                                                           New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutation responsible for genetic disorders or other traits and to assess biodiversity
                                                                                                                                                                                                                                                                                                                                                                                                                                                             31-MAR-2000;
23-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAS92056;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAS92056 standard; cDNA; 1338
                                                                                                                                                                                                                                                                                                                                                                                                  Drmanac RT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30-MAR-2001; 2001WO-US08631.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                               (HYSE-) HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   _
                                                                                                                                                                                                                                                                                                                                                    2001-639362/73.
DB; ABG27869.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     supplement;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACTGTTGCTATGATGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCTGATGCTGTGCCAGCCACAAGAGATGTGGGGACAAGTTCTACGACCCCCTGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTTTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCATGACTCCTT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTCCACTGCAACCACCCAGAGCCATGGCTCCCCGAGGCTGCATCGTAGCTGTCTTTGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACTGTTGCTATGATGA 196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCTGATGCTGTGCCAGCCACACAAGATGTGGGGGACAAGTTCTACGACCCCCTGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTCCACTGCAACCACCCAGAGCCATGGCTCCCCGAGGCTGCATCGTAGCTGTCTTTGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTTTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCCAGTGGCCCCCATGACTCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                chromosome mapping; gene mapping; gene therapy; forensic;
upplement; medical imaging; diagnostic; genetic disorder; ss.
                                                                                                                                                                                                                                                                                                                                                                                                Liu C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                             2000US-0540217.
2000US-0649167.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               novel human diagnostic protein #27860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                         ID No 27860;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25.7%;
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                               Tang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              196
                                                                                                                                                                                                                                     103pp; English
                                                                                                                                                                                                                                                                                                                                                                                                  ΥT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 196;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               . 6.1e-48; ches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                   mutations
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9999999888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity Matches 202; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
 08-MAR-1999;
10-MAR-1999;
12-MAR-1999;
23-MAR-1999;
12-APR-1999;
                                                                                                                                                                                                                    Human; immune related disease; diagnosis; antiinflammatory; cardiant; dermatological; antiarthritic; antirheumatic; immunosuppressive; haemostatic; antithyroid; antidiabetic; notropic; neuroprotective; antianaemic; hepatotropic; virucide; antipsoriatic; antiallergic; antiasthmatic; systemic lupus erythematosus; rheumatoid arthritis; osteoarthritis; spondyloarthropathy; systemic sclerosis; sarcoidosis; idiopathic inflammatory myopathy; Sjogren's syndrome; thyroiditis; systemic vasculitis; autoimmune haemolytic anaemia; diabetes mellitus; autoimmune thrombocytopaenia; immune-mediated renal disease; autoimmune bowei disease; hepatoliary disease; whipple's disease; inflammatory bowei disease; jutten-sensitive enteropathy; autoimmune disease; immune-mediated skin disease; allergic disease; immune-mediated skin disease; allergic disease; immunelological disease; transplantation associated disease;
                                                                                         02-MAR-2000;
                                                                                                                         14-SEP-2000
                                                                                                                                                    WO200053758-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                            Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAC58632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 responsible for genetic disorders or other traits to assess biodiversity and to produce other types of data and products dependent on DNA and amino acid sequences. AAS64197-AAS94564 represent novel human diagnostic coding sequences of the invention.

Note: The sequence data for this patent did not appear in the printed specification, but was obtained in electronic format directly from WIPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 1338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGCCCCTGGACCTTCA 282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCCTTGGCCAGGACCCAGACGTGTGGAAACTGCACCTTCAGAGTCTGCTTTGAGCAGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCAAAGTGGGGGAGAAGCAGCTTTTTGGCGTCTCTCTGCATCCTCAGCCTTCTCTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGCCCCTGGTCCCTCA 1314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCCTCGGATGGGACCCAGAGGGGTGG-AACTGCACCTTCAGAGTCTGCTTCGAGAAGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGATGTGGGGACACGTTCTGTGACCCTCTGCAGCACTGCTATGACAATGCCATCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGATGTGGGGACAAGTTCTACGACCCCCTGCAGCACTGTTGCTATGATGATGATGCCGTCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CACACGGAG-CCCCAGTGGCCCCCATGACTCCTTACCTGATGCTGTTGCCACGCCACACAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTCCCCGAGGCTGCATCGTAGCTGTCTTTGCCATTTTCTGCATCTCCCAGGCTCCTCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                    PRO982 protein UNQ483 encoding cDNA SEQ ID NO:268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   standard;
                                                                                         2000WO-US05841
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BP;
99US-0123618.
99US-0123957.
99US-0125775.
99US-0128849.
                                                           99WO-US05028
                                                                                                                                                                                                                graft-versus-host-disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           311 A; 350 C; 348 G; 329 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cDNA; 662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 148.8;
Pred. No. 1.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .1e-33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                52; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1338;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2;
```

```
20-APR-1999;
28-APR-1999;
04-MAY-1999;
                                                                                                                                        (GETH ) GENENTECH INC.
                                                                                                                                                                                    16-DEC
                                                                                                                                                2000WO-US00219.
2000WO-US00277.
2000WO-US00376.
2000WO-US03565.
2000WO-US04341.
2000WO-US04342.
2000WO-US04414.
                                                                                                                                                                                                                                                          99WO-US12252.
99US-0141037.
99US-0144758.
                                                                                                                                                                                                                                                                          99WO-US08615.
99US-0131445.
99US-0132371.
                                                                                                                                                                            99WO-US31274
                                                                                                                                                                                    99WO-US30095
                                                                                                                                                                                99WO-US30999
                                                                                                                                                                                                99WO-US28551
                                                                                                                                                                                                       99WO-US28301
                                                                                                                                                                                                           99WO-US28409
                                                                                                                                                                                                                99WO-US28313
                                                                                                                                                                                                                           99WO-US23089
                                                                                                                                                                                                                                       99WO-US20944
                                                                                                                                                                                                                                           99WO-US20594
```

Stewart Ashkenazi AJ, Kabakoff RC, Tumas D, Lu Y, Baker KP, Pan KP, Goddard A,
Pan J, Pennica
Watanabe CK, Gurney AL, ... Shelton DL, Synthesia My, Str. Yan M; Mood WI, Hebert C, DL, Smith Henzel Σ

P-PSDB; 2000-572271/53. DB; AAB33467.

Sixty four PRO polypeptides, useful in the diagnosis and tree immune related disorders, e.g. systemic lupus erythematosis, arthritis, osteoarthritis, thyroiditis and diabetes mellitus treatment , rheumatoid

Claim 23; Fig 107; 309pp; English.

CC The present invention describes sixty four human PRO proteins which can CC be used in the treatment of immune related diseases. The human PRO CC proteins, anti-PRO antibodies, agonists and antagonists are useful for CC treating and diagnosing immune related disorders. The disorders are CC selected from systemic lupus erythematosus, rheumatoid arthritis, searchic tis, juvenile chronic arthritis, spondyloarthropathies, CC systemic sclerosis, idiopathic inflammatory myopathies, Sogren's CC syndrome, systemic vasculitis, sarcoidosis, autoimmune haemolytic anaemia, autoimmune thrombocytopaenia, thyroiditis, diabetes mellitus, candemia, autoimmune thrombocytopaenia, thyroiditis, diabetes mellitus, CC immune-mediated renal disease, demyellnating diseases of the central CC immune-mediated renal disease, hepatobiliary diseases, inflammatory cand peripheral nervous systems, hepatobiliary diseases, inflammatory CC cover disease, gluten-sensitive enteropathy and Whipple's disease, autoimmune or immune-mediated skin diseases, allergic diseases, cantonumne or immune-mediated skin diseases, allergic diseases, allergic disease, allergic disease, cantonumne or immune-mediated skin diseases, allergic diseases, allergic disease, allergic dise

Sequence 662 BP; 152 A; 187 ü 167 ິດ 156 Ŧ; 0 other;

Query Match

11.9%; 90 . 6; DВ

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OM nucleic -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                          174.8
90.6
                                                                                                    381.8
313.6
296.4
251.4
208.6
207
189.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score
                                                                                                                                                                                                                                                                                                           628.
617.
483.
436.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query
Match
82.4

80.9

57.2

57.6

54.6

52.6

52.6

52.6

52.6

52.6

52.6

52.6

52.6

52.6

52.6

52.6

53.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

83.8

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13736207 seqs, 6748477542 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IDENTITY_NUC Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-092-297-5
763
1 CTCCACTGCAACCACCCAGA.....ATAAATTTATGTACTTTATA 763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                November 2, 2002, 23:07:27 ; Search time 1692 Seconds (without alignments) 6086.393 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GenCore version 5.1.3
Copyright (c) 1993 - 2002 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          em_estba:*
em_esthum:*
em_estin:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         em_estro:*
em_htc:*
gb_est1:*
gb_est2:*
gb_htc:*
gb_gss:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                em_estov:*
em_estpl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       em_gss_hum:*
em_gss_inv:*
em_gss_pln:*
em_gss_vrt:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        em_estmu:•
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                               10
10
10
                                                                                                                                                                                                      9
9
                                          AA455904
AA456370
BG680336
AW265494
AW265432
BF911386
BF913866
BF914311
BF914311
BF914311
                                                                                                                                                                                                                                                                                                                         BG775668
BG775059
AW991605
AA195677
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            27472414
                       AW265494 xq70c11.x
AW265494 xq52h11.x
AW265432 xq52h11.x
BF911380 IL2-UT001
BF91386 IL3-UT011
BF914311 IL3-UT011
BB664072 148225 MA
BE664075 148231 MA
BB91379 IL2-UT007
                                                                                                                                                                                                                                                         BG775668 602650023
BG775059 602650023
AW991605 RC1-BN000
AA195677 zr3zh04.s
AA455370 aa14e02.r
                                                                                                                                                                                                                                                                                                                                                                                                                                           Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 1
BG775668/c
LOCUS
```

		ဂ	C		'n	ი		O		O						C				o		O	ი	a	n	
4. U	443	42	41	40	39	38	37	36	ü	34	ω	2	31	30	29	28	27	8	25	24	23	22	21	20	19	18
37.6	7	38	38	w	w	œ	Ф	œ	o	Q	9	9	9	9	9	40.4	$\mathbf{L}$	N	49.2	57	7	57.8	m		~	80.2
4.9	• · · · · · · · · · · · · · · · · · · ·	5.0	5.0	5.0	5.0	5.1	5.1	5.1	5. 1	5.2	5.2	5.2	5.2	5.2	5.2	5.3	5.4	5.6	6.4	7.5	7.6	7.6	7.7	8.1	8.5	10.5
914	698	889	424	283	1003	611	1101	914	934	853	815	801	794	749	717	844	575	834	130	454	523	455	464	103	481	537
10	10	10	ا ب	10	10	ا م	3	10	10	12	0	1	10	10	10	12	9	10	9	9	9	9	9	10	ø	φ.
AZ100949 BE903336	BF685231	BG975448	AW382176	H41708	BG331909	AWA74076	CNSOODIC	BE539747	BE567738	CNS03VB2	BG330498	BG330279	BE900864	BF128901	BG122553	CNS0052P	AA760247	BM010458	AW795497	AT081371	AA456254	AA454642	AI275379	BG951874	0613	AA024389
AZ100949 RPCI-23-2 BE903336 601674228	BF685231 602141558	AW382176 CM3-HT032	H41/U8 YOU6101.rl	#G331909 602433068	AW4/40/6 xy09e03.x	ALU/180/ Drosophil	Br539/4/ 602049958	BE56//38 601340401	ALZOZIBS TETRAOGON	\$1263106 BUZ43U174	TC330100 C031201	0787/970	160118109 TO60349	B612601 602353020	ALUGOGO DIOSOPALI	MA 0024 / VV /4800. T	BMULU458 603631411	DWOJOJE COCCE	A10813/1 0x76g10.x	AA430Z34 ZXYYQUB.T	S. VECOET - CO.SC.	A14/03/9 G16380/.X	PROJECTO A CM4-CTOSS	BCSTST WIUSCUS.X	TOPETS COLEMN	1074501

## ALIGNMENTS

	FEATURES Source		AUTHORS TITLE JOURNAL COMMENT	SOURCE ORGANISM REFERENCE	LOCUS DEFINITION ACCESSION VERSION KEYWORDS
/Organism="Homo sapiens" /db_xref="taxon:9606" /clone="IMAGE:4761029" /clone=lib="NHL_MGC_40" /tissue_type="carcinoma, cell line" /lab_host="DH10B (phage-resistant)" /note="Organ: prostate; Vector: pOTB7; Site_1: xhoI; Site_2: EcoRI; cDNA made by oligo-dT priming. Directionally cloned into EcoRI/XhoI sites using the following 5' adaptor: GGCACGAG(G). Library constructed by	http://image.llnl.gov Plate: LLCM1612 row: n column: 06 High quality sequence start: 16 High quality sequence stop: 806. Location/Qualifiers 1.828 Correction	Email: cgapbs-r@mail.nih.gov Tissue Procurement: DCTD/DTP CDNA Library Preparation: Ling Hong/Rubin Laboratory cDNA Library Preparation: Ting Hong/Rubin Laboratory cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can be	NIH-MGC http://mgc.nci.nih.gov/. National Institutes of Health, Mammalian Gene Collection (MGC) Unpublished (1999) Contact: Robert Strausberg, ph.D.	human. Homo sapiens Eukaryota; Metazoa; Chordata; Cranlata; Vertebrata; Euteleostomi; Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 828)	BG775668 828 bp mRNA linear EST 15-MAY-2001 602650023T1 NIH_MGC_40 Homo sapiens cDNA clone IMAGE:4761029 3', mRNA sequence. BG775668 BG775668.1 GI:14045985

```
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                  Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                     Q.
                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                       RESULT 2
BG775059
                                                                                                                                                                     õ
       REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                      B
                                                                                        ACCESSION
                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 652; Conserv
                                                                                VERSION
                                                               SOURCE
                                                                        KEYWORDS
                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                    598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    658
                                                                                                                                                                                                                                                                                                                                                                                                                     538
                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                      419
                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                     478
                                                                                                                                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                     359
                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                       661
                                                                                                                                                                                       119
                                                                                                                                                                                                      109
                                                                                                                                                                                                                       179
                                                                                                                                                                                                                                      541
                                                                                                                                                                                                                                                      239
                                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                       299
                                                                                                                                                                                                                                                                                                     421
                                                                                                                                                        59
                                                                                                                                                                                                                                                                                                                                                                                                                    ACTGTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCAGACGTGTGGAAACTGCA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCTGATGCTGTGCCAGCCACACAAGAGATGTGGGGACAAGTTCTACGACCCCCTGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCATGACTCCTT 120
                                                                                                                                                                                                                                                                                                                                                                                   CCTTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCTGATAAACC 300
                                                                                                                                                                                                                                                                                                                                                    CCACAGGTCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTGCTGATGGGGGCCCAG 600
                                                                                                                                                                                                                                                     AACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCGCTGCCCTGAGGAGGC 540
                                                                                                                                                                                                                                                                                     mRNA sequence.
BG775059
BG775059.1 GI:
EST.
NIH-MGC http://mgc.nci.nih.gov/
National Institutes of Health,
Unpublished (1999)
Contact: Robert Strausberg, Ph.
                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; 1 (bases 1 to 729)
                                                         Homo sapiens
                                                                                                        BG775059
602650023F1 NIH_MGC_40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ling Hong in the laboratory of Gerald M. of California, Berkeley) using ZAP-cDNA (Stratagene) and Superscript II RT (Life Note: this is a NIH_MGC 'Library."

a 214 c 234 g 190 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            82.4%;
99.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 628.8; DB 10;
Pred. No. 1.4e-164;
l; Mismatches 3;.
                                                                                                          Homo
                                                                                                                  729
                                                                                                           sapiens
                                                                                                                  ď
                    Mammalian
                                                                                                          mRNA line
s cDNA clone
                    Gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                  linear
                    Collection
                                                                                                           ear EST 15-MAY-2001
IMAGE:4761029 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rubin (University synthesis kit. Technologies).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2
                                                    Euteleostomi;
                                             Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                           420
                                                                                                                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                            60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                             밁
                                                                                                                                                                                                                             δõ
                                                                                                                                                                                                                                             밁
                                                                                                                                                           Š
                                                                                                                                                                                            δÃ
                                                                                                                           Q
                                                                                                                                              밁
                                                                                                                                                                              맑
                                                             Ş
                                                                              망
                                                                                            δÃ
                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Sim:
Matches 673;
                            Q
                                              밁
               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                             181
                                                                                                                                               302
                                                                                                                                                              360
                                                                                                                                                                               242
                                                                                                                                                                                              300.
                                                                                                                                                                                                              182
                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                               122
                                                                                422
                                                                                                480
                                                                                                                362
                                                                                                                              420
                                599
                                                482
                                                                                                                                                                                                                                                                              62
                                                                                                                                                                                                                                                                                                                              61
                542
                                                                                                                                                                                                                                                                                                               N
                                                                                                                                                                                                                                                                                                             TTTTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCATGACTCCTT 120
                                                                                                                                                                                                                                             ACCTGATGCTGTGCCAGCCACACAAGAGATGTGGGGACAAGTTCTACGACCCCCTGCAGC 180
                                                                                                                                                                             GCCCACAGGTCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTGCTGATGGGGGCCCGCCACAGGTCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTGCTGATGGGGGCCCGCCACAGGTCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTGCTGATGGGGGCCC
               AGGGACTCTGAACCCTCCTGATGACCCSTATGGCCAACATCAACCCGGCACCACCAAG
```

241 299 181 239

301 359

479 361 419

658

600

598 481 538 421

```
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: DCTD/DTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      http://image.llnl.gov
plate: LLCM1612 row: n column:
High quality sequence stop: 726.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         found through the I.M.A.G.E. Consortium/LLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CDNA Library Preparation: Ling Hong/Rubin Laboratory CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can
                                                   Similarity
                                                                                                                                                                                                                                                                                 169
Conservative
                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                /lab_host="DH10B (phage-resistant)"
/lab_host="DH10B (phage-resistant)"
/note="Organ: prostate; Vector: pOTB7; Site_1: xhoI;
/note="Organ: prostate; Vector: pOTB7; Site_1: xhoI;
/note="Corgan: prostate; Vector: pOTB7; Site_1: xhoI;
/note="Corgan: prostate; Vector: priming."

Site_2: EcoRI; cDNA made by oligo-dT priming.

Directionally cloned into EcoRI/XhoI sites using the policy of structed by following 5; adaptor: GGCACGAG(G). Library constructed by following 5; adaptor: GG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="IMAGE:4761029"
/clone_lib="NIH_MGC_40"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /tissue_type="carcinoma,
                                                        98.8%;
     1;
                                                              Score
Pred.
     core 617.4;
red. No. 2.1e
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         90
                                                              ; DB 10;
                      Indels
                                                                                                                             Length
                            5
                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          эd
```

```
밁
                                  δÃ
                                                                          밁
                                                                                                        δÃ
                                                                                                                                                                                                                   BASE CORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 3
AW991605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Locus
                                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                   COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                  195
         69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            659
TATCCAGGAGCAAAGCACACG 681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TATCCAGGAGCAAAGCACAGG 737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCTGGCTGGGGAACCCTTCA-CCCTTCTGTGAGATTTTCCATCATCTCA-AGTTCTCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: asimpson@ludwig.org.br
This sequence was derived from the FAPESP/LICR Human Cancer Genome
Project. This entry can be seen in the following URL
(http://www.ludwig.org.br/scripts/gethtml2.pl?tl=&t2=RC1-BN0005-030
500-015-g07&t3=2000-05-0344-1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Shotgun sequencing of the human transcriptome with ORF expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Dlas Neto, E., Garcia Correa, R., Verjovski-Almeida, S., Briones, M.R., Nagai, M.A., da Silva, W. Jr., Zago, M.A., Bordin, S., Costa, F. F., Goldman, G.H., Carvalho, A.F., Matsukuma, A., Baia, G.S., Simpson, D.H., Brunstein, A., deoliveira, P.S., Bucher, P., Jongeneel, C.V., O'Hare, M.J., Soares, F., Brentani, R.R., Reis, L.F., de Souza, S.J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AW991605
RC1-BN0005-030500-015-g07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Fax: +55-11-2707001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Simpson A.J.G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sequence tags
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AW991605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (bases 1 to 533)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               primer: puc 18 forward
                                                                                                                                                                                                                                                                                                                                                                                                                                                         quality sequence start: 16 quality sequence stop: 533. Location/Qualifiers
                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        +55-11-2704922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Natl. Acad. Sci. U.S.A.
                                                                                                                                                                                                                                  a
                                                                                                                                                                                                                                                         /note-*Organ: breast_normal; Vector: puc18; Site_1: SmaI; Site_2: SmaI, A mini-library was made by cloning products derived from ORESTES PCR (U.S. Letters Patent application No. 196,716 - Ludwig Institute for Cancer Research) profiles into the pUC 18 vector. Reverse transcription of tissue mRNA and cDNA amplification were performed under
                                                                                                                                                                                                                          tissue mRNA and cDNA amplification were
low stringency conditions."
156 c 150 g 111 t
                                                                                                                                                                                                                                                                                                                                                                                    /db_xref="taxon:9606"
/clone_lib="BN0005"
                                                                                                                                                                                                                                                                                                                                                                       /dev_stage="Adult"
                                                                                                                                                                                                                                                                                                                                                                                                                        ∕organism="Homo sapiens"
                                                                                                                                                             63.4%;
98.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Chordata; Craniata; Vertebrata; Euteleostomi; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                         Score 483.8; DB
Pred. No. 3.4e-12
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          533 bp mRN
BN0005 Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4 andar, 01509-010,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (7),
                                                                                                                                                           .4e-124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mRNA
Homo sapiens o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3491-3496 (2000)
                                                                                                                                                                             9
                                                                                                                                           Indels
                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cDNA, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sao
                                                                                                                                       ω
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EST 05-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Paulo-SP,
                                                                                                                                       Gaps
                                    254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    660
                                                                                                                                       ω
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 4
AA195677/c
LOCUS
                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                          TITLE
JOURNAL
MEDLINE
                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   615 CCTGATGACCCSTATGGCCAACATCAACCCGGCACCACCCCCAAGG 659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         555
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               375
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTAGAATTCTGGACAGCATGAGATGCGTGTGCTGATGGGGGCCCAGGGACTCTGAACCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGCTAATGGAACATCAGGGGAACG 374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTAGAATTCTGGACAGCATGAGATGCGTGTGCTGATGGGGGCCCAGGGACTCTGAACCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTCTGTGACCTGTCTGAGGCCCACCCTGCCGCTGCCCTGAGGAGGCCCCACAGGTCCCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTCTGTGACCTGTCTGAGGCCCACCCTGCCCCTGAGGAGGCCCACAGGTCCCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATGACTCCTGGATTCTCCTTCCTGGGTGAGCCTGGAGAAAGAGGCTGGTGTTACCTGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATGACTCCTGGATTCTCCTTCCTGGGTGGGCCTGGAGAAGAGGCTGGTGTTACCTGAGA 434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCTGATAAAACCAGAACTGCGACTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCTGATGACCCCTATGGCCAACATCAACCCGGCACCACCCCAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTTGAGCAGTGCTGCCCTGGACCTTCATGGTGAAGCTGATAAACCAGAACTGCGACTCA
                                                                                                                                                                             Email: est@wastl.edu
Email: est@wastlable royalty-free th
This clone is available royalty-free th
IMAGE Consortium (info@image.llnl.gov)
Insert Length: 857  Std Error: 0.00
Insert Length: 857  Std Error: 308.
                                                                                                                                                                                                                                                                                                                                                                 Hillier, L., Lennon, G., Becker, M., Bonaldo, M.F., Chiapelli, B., Chiase, S., Dietrich, N., Dubuque, T., Favello, A., Gish, W., Hawkins, M., Hultman, M., Kucaba, T., Lacy, M., Le, M., Le, N., Mardis, E., Moore, B., Morris, M., Parsons, J., Prange, C., Rifkin, L., Rohlfing, T., Schellenberg, K., Soares, M.B., Tan, F., Thierry-Meg, J., Trevaskis, E., Underwoodyk, Mohldmann, P., Marterston, R., Wilson, R. and Marra, M. Generation and analysis of 280,000-human expressed sequence tags Genome Res. 6 (9), 807-828 (1996)
                                                                                                                                                                                                                                                                                                    Washington University School of Medicine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               human.
                                                                                                                                                                                                                                                                                                                                                            97044478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AA195677.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AA195677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  zr32h04.s1 Soares_NhHMPu_S1
3', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AA195677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (bases 1 to 475)
                                                                                                                                                                  quality sequence stop:
Location/Qualifiers
                                                                                                                                                                                                                                                                        314 286 1800
314 286 1810
                                                                                                                                                                                                                                                                                                                                            Wilson-RK
                                  /clone="IMAGE:665143"
/clone_lib="Soares_NhHMPu_S1"
/tissue_type="Pooled human me
pregnant uterus"
                                                                                                     /organism="Homo sapiens"
/db_xref="GDB:5427175"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GI:1785355
                    host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Chordata; Craniata; Vertebrata; Euteleostomi; Primates; Catarrhini; Hominidae; Homo.
   mixed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                475 bp
_S1 Homo
   (see
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mRNA linear
sapiens cDNA clone
below);
                                                  melanocyte,
                                                                                                                                                                                                                     through LLNL ;

/) for further
                                                                                                                                                                                                                                                                                                       Louis,
 Vector:
                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                       63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EST 19-MAY-1997
IMAGE:665143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             314
```

```
TITLE
JOURNAL
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                         RESULT 5
AA455904/c
                                                                                                                                                                                                                                   SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches 469;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      291 CTGATAAACCAGAACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTC 350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCACCCCAAGGCTGGCTGGGGAACCCTTCACCCTTCTGTGAGATTTTCCATCATCTCAA 707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAAACACACACTCAACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCGCT 527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGAAAGAGGCTGGTGTTACCTGAGATCTGGGATGCTGAGTGGC-TGTTTGGGGGCCAGA 467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AG-CTAATGGAACATCAGGGGAACGATGACTCCTGGATTCTCCTTC-CTGGGTGGGCCTG 408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTTCTCTTCTATCCAGGAGCAAAGCACAGGATCATAATAAATTTATGTACTTTA 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCCCTGAGGAGGCCCACAGGTCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTGCT 587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAAACACACACTCAACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAGAAAGAGGCTGGTGTTACCTGAGATCTGGGATGCTGAGTGGCTTGTTTGGGGGCCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGCCTAATGGAACATCAGGGGAACGATGACTCCTGGATTCTCCTTCNCTGGGTGGGCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGATAAACCAGAANTGCGACTCAGCCCGGGACCTCGGATGACAGGCTTTGTCGCAGTGTC 416
                                                                                                                                                                                                                                                                        aal4e02.sl Soares_NhHMPu_Sl Homo sapiens
3', mRNA sequence.
AA455904
AA455904.1 GI:2178680
EST.
                                                      Schellenberg, K., Steptoe, M., T., Waterston, R. and Wilson, R. Washu-Merck EST project 1997, Unpublished (1997)
Washington University School of Medicine 4444 Forest Park Parkway, Box 8501, St.
                                          Contact: Wilson RK
                                                                                                                           Hillier,L., Allen,M., Bowles,L., Dubuque,T., Geisel,G., Kucaba,T., Lacy,M., Le,N., Lennon,G., Marra,M., Martin,J.
                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 417)
                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                      naman.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (Pharmacia) with a modified polylinker; Site_1: Not I; Site_2: Ecc RI; Equal amounts of plasmid DNA from three normalized libraries (melanocyte 2NbHH, pregnant uterus NbHPU, and fetal heart NbHH19W) were mixed, and ss circles were made in vitro. Following HAP purification, this DNA was used as tracer in a subtractive hybridization reaction. The driver was PCR-amplified cDNAs from pools 5,000 clones made from the same 3 libraries. The pools consisted of I.M.A.G.E. clones 260232-265223, 340488-345479, and 484488-489479."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 57.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 436.6; DB 9;
Pred. No. 4.8e-111;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                              Lennon,G.; Marra,M., Martin,J., Moore,B.,M., Tan,F., Theising,B., White,Y., Wylie
Louis,
                                                                                                                                                                                                                                                                                                                                                  CDNA
                                                                                                                                                                                                                                                                                                                                                linear
DNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 475;
  8
                                                                                                                                                                                                                                                                                                                                                EST 06-JUN-1997
IMAGE:813242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            and ss circles
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      from pools of
                                                                                                                                                       Jost,S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          this DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             647
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ω
••
```

g Ş 밁 δõ B Ş 밁 Ş 밁 Qy Ş

밁 Qy

В

BASE CO

δÃ

VERSION

SOURCE ORGANISM

Homo sapiens

KEYWORDS VERSION ACCESSION DEFINITION rocus

5', mRNA sequence.
AA456370
AA456370.1 GI. ...

GI:2178946

412 bp aa14e02.r1 Soares\_NhHMPu\_S1 Homo 5', mRNA sequence

mRNA sapiens

linear cDNA clone

EST 06-JUN-1997 IMAGE:813242

```
RESULT 6
AA456370
                                                                                                                        Š
                                                                                                                                                                   B
                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                   Вb
                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                     망
                                                                                                                                                                                                                                                                                                                                                                        50
                                                                                                                                                                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches 416;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           346
                                                                                                                                                                                                            646
                                                                                                                                                                                                                                                                                            586
                                                                                                                                                                   117
                                                                                                                                                                                                                                                   177
                                                                                                                                                                                                                                                                                                                                   237
                                                                                                                                                                                                                                                                                                                                                                          526
                                                                                                                                                                                                                                                                                                                                                                                                                   297
                                                                                                                                                                                                                                                                                                                                                                                                                                                            466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    417
                                                                                                                          706
                                                                                    57
                                                                                                                                                                                                                                                                                                                                                                                                              GAGAAACACACACTCAACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCG
                                                                                                     AAGTTCTCTTCTATCCAGGAGCAAAGCACAGGATCATAATAAATTTATGTACTTTAT 762
                                                                                                                                                                                     GCACCACCCCAAGGCTGGCTGGGGAACCCTTCACCCTTCTGTGAGATTTTCCATCATCTC
                                                                                                                                                                                                                                                                    CTGATGGGGGCCCAGGGACTCTGAACCCTCCTGATGACCCSTATGGCCAACATCAACCCG
                                                                                                                                                                                                                                                                                                                                                  CTGCCCTGAGGAGGCCCACAGGTCCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTGGAGAAAGAGGCTGGTGTTACCTGAGATCTGGGATGCTGAGTGGCTGTTTGGGGGCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTGGAGAAAGAGGCTGGTGTTACCTGAGATCTGGGATGCTGAGTGGCTGTTTGGGGGCCA 465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAGTTCTCTTCTATCCAGGAGCAAAGCACAGGATCATAATAAATTTATGTACTTTAT
                                                                                                                                                               GCACCACCCCAAGGCTGGGGGGAACCCTTCACCCTTCTGTGAGATTTTCCATCATCTC
                                                                                                                                                                                                                                                 CTGATGGGGGCCCAGGGACTCTGAACCCTTCCTGATGACCCCTATGGCCCAACATCAACCCG
                                                                                                                                                                                                                                                                                                                                 CTGCCCTGAGGAGGCCCACAGGTCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGAAACACACTCAACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Fax: 314 286 1810
Email: est@watson.wustl.edu
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
Seq primer: -41m13 fwd. ET from Amersham
High quality sequence stop: 400.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            pregnant uterus"

/lab_host="DH10B"

/note="Organ: mixed (see below); Vector: pT7T3D-Pac
/note="Organ: mixed in vitt organization of plasmid DNA from three
normalized libraries (melanocyte 2NbHM, pregnant uterus
NbHPU, and fetal heart NbHH19W) were mixed, and ss circles
were made in vitro. Pollowing HAP purification, this DNA
was used as tracer in a subtractive hybridization
reaction. The driver was PCR-amplified cDNAs from pools of
5,000 clones made from the same 3 libraries. The pools
consisted of I.M.A.G.E. clones 260232-265223,
340488-345479, and 484488-489479."

99 a 108 c 117 g 93 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone="IMAGE:813242"
/clone_lib="Soares_NhHMPu_S1"
/tlssue_type="Pooled human melanocyte, fetal heart,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /db_xref="GDB:604415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     organism-"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     54.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ۳
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 416.6; DB 9;
Pred. No. 1.7e-105;
1; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 417;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                 178
                                                                                                                                                                                                                                                                                                                                                                     585
                                                                                                                                                                                                                                                                                                                                                                                                                                                       525
                                                                                                                                                                 58
                                                                                                                                                                                                                                               118
                                                                                                                                                                                                                                                                                        645
                                                                                                                                                                                                                                                                                                                                                                                                                238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

```
Qγ
                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                 ₽
                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches 412;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                             433
                                                                                                                                                                                                                                                                   120
                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                  193
                                                                                                                                                                                                                                                                                                                                                                  133
                                                                                                                                                                                                                                                                                                                                 60
                                                                                                                                                                                                                                                                                                                                                                                                   73 CCAGGCTCCTCTGCTCACACGGAGCCCCCAGTGGCCCCCCATGACTCCTTACCTGATGCTGT 132
                                                                                                                                                                                                                                                                                                                                                                                                 \vdash
GCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCTGATAAACCAGAACTGCGACT 312
                                                                                                                  CAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGCTAATGGAACATCAGGGGAA
                                                                                                                                                  CAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGCTAATGGAACATCAGGGGAA 372
                                                                                                                                                                                                                                                                   ATGATGCCGTCGTGCCCTTGGCCAGGACCCAGACGTGTGGAAACTGCACCTTCAGAGTCT 252
                                                                                                                                                                                                                                                                                                                                     GCCAGCCACACAGAGATGTGGGGACAAGTTCTACGACCCCCTGCAGCACTGTTGCTATG
                                                                                                                                                                                                                                                     ATGATGCCGTCGTGCCCTTGGCCAGGACCCAGACGTGTGGAAACTGCACCTTCAGAGTCT
                                                                                                                                                                                                                                                                                                                                                                                     CAGGCTCCTCTGCTCACACGGAGCCCCAGTGG-CCCCATGACTCCTTACCTGATGCTGT
                                                                                                                                                                                                                                                                                                                   GCCAGCCACACAAGAGATGTGGGGACAAGTTCTACGACCCCCTGCAGCACTGTTGCTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 412)

Hillier, L., Allen, M., Bowles, L., Dubuque, T., Geisel, G., Jost, S., Kucaba, T., Lacy, M., Le, N., Lennon, G., Marra, M., Martin, J., Moore, B., Schellenberg, K., Steptoe, M., Tan, F., Theising, B., White, Y., Wylie, T., Waterston, R. and Wilson, R.

WashU-Merck EST Project 1997

Thombisched Jones.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IMAGE Consortium (info@image.linl.gov) for Seq primer: -28ml3 rev2 ET from Amersham High quality sequence stop: 398.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: est@watson.wustl.edu
This clone is available royalty-free through LLNL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Washington University Scho
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: Wilson RK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished (1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          314 286 1800
314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         reaction. The driver was PCR amplified cDNAs from pools of 5,000 clones made from the same 3 libraries. The pools consisted of I.M.A.G.E. clones 260232-265223, 340488-345479, and 484488-489479."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /lab_host="PHIOB"
/lab_host="PHIOB"
/note="Organ: mixed (see below); Vector: pT773D-Pac
(Pharmacia) with a modified polylinker; Site_1: Not I;
Site_2: Eco RI; Equal amounts of plasmid DNA from three
normalized libraries (melanocyte 2NbHM, pregnant uterus
NBHPU, and fetal heart NbHH19W) were mixed, and ss circles
were made in vitro. Following HAP purification, this DNA
was used as tracer in a subtractive hybridization
The driver was non-amolification forms.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Homo sapiens"
/db_xref="GDB:6044152"
/db_xref="taxon:9606"
/clone="IMAGE:813242"
/clone=!ib="Spares_NhHMPu_S1"
/tissue_type="pooled human melanocyte, fetal heart,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  pregnant uterus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              52.6%;
99.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a
                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 401; DB 9;
Pred. No. 3.9e-101;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             119 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  School of Medicine way, Box 8501, St. J
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 412;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Louis, MO 63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                further information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                contact the
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                  299
                                                                                                                                                                                                                                                     179
                                                                                                                                                                                                                                                                                                                     119
                                                                                                                                                                                                                                                                                                                                                      192
                                                                                                                                                                                                                                                                                                                                                                                       59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and
                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>ب</u>
                                                                            밁
                                                                                                          Š
                                                                                                                                                밁
                                                                                                                                                                          δÃ
                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                              ğ
                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                            Q
                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                              οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 7
BG680336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
            301
                                             616
                                                                              241
                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                376
                                                                                                                                                                                                                                                                                                                                                                                  317
                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                 _
```

ş 밁 δõ 밁

밁 Š

δÃ

```
Query Match
Best Local Similarity
                                                                                                                                                                          496 TCTGTGACCTGTCTGAGGCCCACCCTGCCGCTGCCCTGAGGAGGCCCCACAGGTCCCCTTC 555
                                                                                                                                                                                                                             TAGAATTCTGGACAGCATGAGATGCGTGTGCTGATGGGGGCCCCAGGGACTCTGAACCCTC
                                                                                      TAGAATTCTGGACAGCATGAGATGCGTGTGCTGATGGGGGCCCAGGGACTCTGAACCCTC
                                                                                                                                                                                                                                                                               TGACTCCTGGATTCTCCTTGCTTGGGTGGGCCTGGAGAAAGAGGCTGGTGTTACCTGAGAT 435
                                                                                                                                                                                                                                                                                                                                                  CCGGACCTCGGA-TGACAGGCTTTGTCGCAGTGTCAGCTAATGGAACATCAGGGGAACGA 375
                                                                                                                                                                                                           407;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Cr. Mammalia; Eutheria; Primates; Ca. 1 (bases 1 to 604)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, M. Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: cgapbs-r@mail.nih.gov
Tissue Procurement: James Cleaver, M.D.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov plate: LLAM10614 row: 1 column: 08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BG680336
602629230F1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BG680336.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BG68033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mRNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                numan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   quality sequence stop: 418.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /tissue_type="squamous cell carcinoma"
/lab_bost="DH10B (T1 phage-resistant)"
/note="Organ: skin; Vector: pCMV-SPORT6; Site_1:
Site_2: Sall; Cloned unidirectionally. Primer: O
Average insert size 1.5kb. Library constructed
Technologies. Note: this is a NCI_CGAP Library."
a 171 c 140 g 118 t 5 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone="IMAGE:4754071"
/clone_lib="NCI_CGAP_Skn4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCI_CGAP_Skn4 Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                  50.08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 381.8;
Pred. No. 1.1
                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mammalian
                                                                                                                                                                                                                                                                                                                                                                                                                                                  1.1e-95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                               10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A linear EST 01-MAY-2001 cDNA clone IMAGE:4754071 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                          4
                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 l: NotI;
: Oligo dT.
ed by Life
                                                                                                      615
 360
                                  675
                                                                     300
                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ьe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  d.
                                                                                                                                                                                                                                                                                                                                                                                                                          2.
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AW265494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VERSION
                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                    밁
                                                                   Š
                                                                                                              밁
                                                                                                                                                Q
                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                    BASE COUNT
                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   450 GGCTGTTTGGGGGCCAGAGAAACACACACTCAACTGCCCACTTCATTCTGTGACCTGTCT 509
                                                                                                                129
                                                                                                                                                                                                                                  510
690 GATTTTCCATCATCTCAAGTTCTCTTCTATCCAGGAGCAAAGCACAGGATCATAATAAAT 749
                                    189
                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
                                                                                                                                                                                             69
                                                                                                                                                                                                                                                                           9
                                                                                                                                  GCATGAGATGCGTGTGCTGATGGGGGCCCAGGGACTCTGAACCCTCCTGATGACCCSTAT 629
                                                                                                                                                                                                                GAGGCCCACCOTGCCGCTGCCCTGAGGAGGAGGCCCACAGGTCCCCCTTCTAGAATTCTGGACA 569
                                                                                                                                                                                                                                                                         GGCTGTTTGGGGGCCAGAGAAACACACACTCAACTGCCCACTTCATTCTGTGACCTGTCT 68
                                    GGCCAACATCAACCCGGCACCACCCCAAGGCTGGCTGGGGAACCCTTCACCCTTCTGTGA 248
                                                         GGCCAACATCAACCCGGCACCACGCCAAGGCTGGCTGGGGAACCCTTCACCCTTCTGTGA 689
                                                                                                                  GCATGAGATGCGTGTGCTGATGGGGGGCCCAGGGACTCTGAACCCTCCTGATGACCCCTAT 188
                                                                                                                                                                                             GAGGCCCACCCTGCCGCTGCCCTGAGGAGGCCCACAGGTCCCCTTCTAGAATTCTGGACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Edward Shillitoe Ph.D., Silvio Gutkind
Chidchanok Leethanakul D.D.S., Michael Emmert-Buck M.D. Ph.
cDNA Library Preparation: David B. Krizman, Ph.D.
cDNA Library Arrayed by: Greg Lennon, Ph.D.
DNA Sequencing by: Washington University Genome Sequencing
Olone distribution: NCI-CGAP clone distribution informatic
found through the I.M.A.G.E., Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AW265494.1 GI:6642310
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Possible reversed clone: polyT not found Seq primer: -40UP from Glbco. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 xq70c11.x1 NCI_CGAP_HN7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mammalia; Eutheria;
1 (bases 1 to 354)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             www-bio.llnl.gov/bbrp/image/image.html
                                                                                                                                                                                                                                                                                                                                                                                                                                                        99
                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gene Index
                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note-"Vector: pamp10; cDNA made by oligo-dT priming. Non-directionally cloned into the UDG sites of pamp10. Size-selected on agarose gel, average insert size 500 primary library; non-amplified. cDNA Library Preparation: David B. Krizman, Ph.D (NCI). Reference: Krizman et al. (1996) Cancer Research 56:5380-5383." 102 c 78 g 75 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Krizman et al.
102 c 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="IMAGE:2755988"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone_11b="NCI_CGAP_HN7"
/tissue_type="normal squamous epithelium, floor of mouth"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                         41.18;
99.78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chordata; Craniata; Vertebrata; Euteleostomi; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                      Score 313.6; DB 9; pred. No. 8.9e-77; 1; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      78 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     354
Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mRNA linea
is cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ar EST 28-DEC-1999
IMAGE:2755988 3',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequencing Center information can be
                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .D.
                                                                                                                                                                                                 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          þe
                                                                                                                                                                                                                                                                                                                                                            0;
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 9
AW265432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                           δÃ
                                                                                                                                                                                     망
                                                                                                                                                                                                                                                                                                                                    ORIGIN
 Ş
                                      밁
                                                                    Š
                                                                                                            ₽
                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                       BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         249
                                                                                                          510 GAGGCCCACCCTGCCGCTGCCCTGAGGAGGCCCACAGGTCCCCTTCTAGAATTCTGGACA 569 GAGGCCCACCCTTGCCGCTGCCCTGAGGAGGCCCACAGGTCCCCTTCTAGAATTCTGGACA 128
                                                                                                                                                                                 Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTATGTACTTTATA 763
GGCCAACATCAACCCGGCACCACCCCAAGGCTGGCTGGGGAACCCTTCACCCTTCTGTGA 689
                                                                        GCATGAGATGCGTGTGCTGATGGGGGCCCCAGGGACTCTGAACCCTCCTGATGACCCCSTAT 629
                                        GCATGAGATGCGTGTGCTGATGGGGGCCCAGGGACTCTGAACCCCTCCTGATGACCCCTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tissue Procurement: Edward Shillitoe Ph.D., Silvio Chidohanok Leethanakul D.D.S., Michael Emmert-Buck Chidohanok Leethanakul D.D.S., Michael Emmert-Buck Chidohanok The Ph.D. CDNA Library Preparation: David B. Krizman, Ph.D. CDNA Library Arrayed by: Greg Lennon, Ph.D. DNA Sequencing by: Washington University Genome Se Clone distribution: NCI-CGAP clone distribution in found through the I.M.A.G.E. Consortium/LLNL at: www-bio.llnl.gov/bbrp/image/image.html
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                xq52h11.x1 NCI_CGAP_HN7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mRNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AW265432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               High quality sequence stop: Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tumor Gene Index
Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 (bases 1 to 308)
NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AW265432.1 GI:6642248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Possible reversed clone: polyT not Seq primer: -40UP from Gibco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mammalia;
                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                         69
                                                                                                                                                                                                                                                                                                                                                   /note-"Vector: pamp10; cDNA made by oligo-dT priming. Non-directionally cloned into the UDG sites of pawp10 Size-selected on agarose gel, average insert size 50 primary library; non-amplified. cDNA Library preparation: David B. Krizman, Ph.D (NCI). Reference: Krizman et al. (1996) Cancer Research 56:5380-5383." 97 c 73 g 69 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Homo saplens,"
/db_xref="taxon:9606"
/clone="INAGE:2754309"
/clone_11b="NCI_CGAP_HN7"
/clone_11b="NCI_CGAP_HN7"
/tissue_type="normal squamous epithelium,
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Metazoa;
                                                                                                                                                                                                                                                                             38.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chordata; Craniata; Vertebrata; Euteleostomi; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                           Score 296.4; DB 9;
Pred. No. 5.3e-72;
1; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       308
Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      289.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IMAGE: 2754309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sequencing information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          floor of mouth"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            M.D. Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EST 28-DEC-1999
                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                308
                                                                                                                                                                                                                                                                                                                                                                                                                                   P10.
                                                                                                                                                                                                                                                                                                                                                                                                                                   đđ
```

```
ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
MEDLINE
COMMENT
          밁
                                                                           밁
                                                                                                           Ş
                                                                                                                                                                                                                 BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 10
BF911380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             맒
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                               Matches
                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                         418
                                                                                                             358
        61
                                                                                                                                           Local Sim
hes 252;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             189
              GCTGGTGTTACCTGAGATCTGGGATGCTGAGTGGCTGTTTGGGGGCCAGAGAAACACACA 477
                                                                                    GATTTTCCATCATCTCAAGTTCTCTTCTATCCAGGAGCACAAGCACAGGATCATAATAAAT 749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This sequence was derived from the FAPESP/LICR Human Cancer Genome Project. This entry can be seen in the following URL (http://www.ludwig.org.br/scripts/gethtml2.pl?tl=IL2&t2=IL2-UT0073-081100-213-002_1&t3=2000-11-08&t4=1)
Seq primer: puc 18 forward
High quality sequence stop: 220.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FMAX: TOU AL FOR THE FAPESP/LICR Human Cancer Genome This sequence was derived from the FAPESP/LICR Human Cancer Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 (bases 1 to 253)

Dias Neto,E., Garcia Correa,R., Verjovski-Almeida,S., Briones,M.R.,

Nagai,M.A., da Silva,W. Jr., Zago,M.A., Bordin,S., Costa,F.F.,

Goldman,G.H., Carvalho,A.F., Matsukuma,A., Bala,G.S., Simpson,D.H.,

Brunstein,A., deOliveira,P.S., Bucher,P., Jongeneel,C.V., O'Hare,M.J., Soares,F., Brentani,R.R., Reis,L.F., de Souza,S.J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tel: +55-11-2704922
Fax: +55-11-2707001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 andar,
                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Simpson A.J.G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Shotgun sequencing of the human transcriptome with ORF expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sequence.
BF911380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sequence tags
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              253 bp
112-0T0073-081100-213-D02_1 UT0073
                                                                                                                                                                                                                                 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Natl. Acad. Sci. U.S.A.
                                                                                                                                                                                                                   /note="Organ: uterus_tumor; Vector: pucl8; Site_1: SmaI; Site_2: SmaI; A mini-library was made by cloning products derived from ORESTES PCR (U.S. Letters Patent application No. 196,716 - Ludwig Institute for Cancer Research) profiles into the pUC 18 vector. Reverse transcription of tissue mRNA and cDNA amplification were performed under low stringency conditions."
                                                                                                                                                                                                                                                                                                                                                               /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone_lib="UT0073"
/dev_stage="Adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GI:12302838
                                                                                                                                                        32.9%;
                                                                                                                                      Score 251.4; DB 10
Pred. No. 1.8e-59;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (7),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mRNA
Homo
                                                                                                                                                                      DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3491-3496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ٠
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01509-010,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CDNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sao
                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Paulo-SP,
                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18-JAN-2001
                                                                  60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   248
                                                                                                                                    0
```

밁

```
δÃ
                                                                                                                                                                              BASE
                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 1:1
BF913866/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       POCUS
                                                                                     Matches
                                                                                                     Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                              COUNT
494 ATTCTGTGACCTGTCTGAGGCCCACCCTGCCGTGCCCTGAGGAGGCCCACAGGTCCCCT 553
                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 CTCAACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCGCTGCCCTGAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CAGGGACTCTGAA 253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGCCCACAGGTCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTGCTGATGGGGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTCAACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCGCTGCCCTGAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGGGACTCTGAA 610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: asimpson@ludwig.org.br
This sequence was derived from the FAPESP/LICR Human Cancer Genome
Project. This entry can be seen in the following URL
(http://www.ludwig.org.br/scripts/gethtml2.pl?tl=IL3&t2=IL3-UT0114-
301100-357-C03&t3=2000-11-30&t4=1)
                                                                               Similarity 95.1
14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Seq primer: puc 18 forward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tel: +55-11-2704922
Fax: +55-11-2707001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Simpson A.J.G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Shotgun sequencing of the human transcriptome with ORF sequence tags
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Dlas Neto, E., García Correa, R., Verjovski-Almeida, S., Briones, M.R., Nagai, M.A., da Silva, W. Jr., Zago, M.A., Bordin, S., Costa, F.F., Goldman, G. H., Carvalho, A. F., Matsukuma, A., Baia, G. S., Simpson, D.H., Brunstein, A., deOliveira, P.S., Bucher, P., Jongeneel, C., V., O'Hare, M.J., Soares, F., Brentani, R.R., Reis, L.F., de Souza, S.J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Proc. Natl.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Simpson, A.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 245)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BF913866 245 bp mRNA linear IL3-UT0114-301100-357-C03 UT0114 Homo sapiens cDNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BF913866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        human.
                                                                                                                                                                              55
                                                                                                                                                                                                                                                                                                                                                                                                                                     quality sequence stop: 245.
                                                                                                                                                                   /note="Organ: uterus_tumor; Vector: puc18; Site_1: SmaI; Site_2: SmaI, A mini-library was made by cloning products derived from ORESTES PCR (U.S. Letters Patent application No. 196,716 - Ludwig Institute for Cancer Research) profiles into the PC 18 vector. Reverse transcription of tissue mRNA and cDNA applification were performed under low stringency conditions."
                                                                                                                                                                                                                                                                                                                      /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone_lib="UT0114"
/dev_stage="Adult"
                                                                                                                                                                                                                                                                                                                                                                                                                      Cocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Acad.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GI:12305324
                                                                                                 27.3%;
95.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sci.
                                                                                               Score 208.6; DB Pred. No. 1.5e-47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         U.S.A.
                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4 andar,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (7),
                                                                                                                DB 10;
                                                                               10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3491-3496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01509-010,
                                                                                                                Length
                                                                                                              245;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sao Paulo-SP,
                                                                           0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EST 18-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          expressed
                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          537
                                                                           0,
```

```
RESULT 12
BF914311/c
LOCUS
DEFINITION
ACCESSION
                                                                                                                                                                                      BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                 Query Match
Best Local S
Matches 213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            674 CTTCACCCTTCTGTGAGATTTTCCATCATCTCAAGTTCTCTA 718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              225
                                                          494 ATTCTGTGACCTGTCTGAGGCCCCACCCTGCCCTGAGGAGGCCCACAGGTCCCCT 553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        45
                   ATTCCGGCTCTCTGGGGAGGCCCACCCTGCCGCTGCCCTGAGGAGGCCCACAGGTCCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTTCACCCTTCTGTGAGATTTTCCATCATCTCAAGTTCTCTTCTA 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCTAGAATTCTGGACAGCATGAGATGCGTGTGCTGATGGGGGCCCCAGGGACTCTGAACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCTAGAATTCTGGACAGCATGAGATGCGTGTGCTGATGGGGGGCCCAGGGACTCTGAACCC
                                                                                                 tch 27.1%; al Similarity 94.7%; 213; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Email: asimpsoneludwig.org.br
This sequence was derived from the FAPESP/LICR Human Cancer Genome Project. This entry can be seen in the following URL (http://www.ludwig.org.br/scripts/gethtml2.pl?tl=IU3&t2=IL3-UT0114-301100-356-El1&t3-2000-11-30&t4-1)
Seq primer: puc 18 forward
High quality sequence stop: 245.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Simpson, A.J.
Shotoun sequencing of the human transcriptome with ORF expressed sequence tags
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Dias Neto, E., García Correa, R., Verjovski-Almeida, S., Briones, M.R., Nagal, M.A., da Silva, W. Jr., Zago, M.A., Bordin, S., Costa, F.F., Goldman, G.H., Carvalho, A.F., Matsukuma, A., Bala, G.S., Simpson, D.H., Brunstein, A., deOliveira, P.S., Bucher, P., Jongeneel, C.V., O'Hare
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BF914311.1
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryola; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BF91431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BF914311 245 bp mRNA linear EST 18-JAN-200
IL3-UT0114-301100-356-E11 UT0114 Homo sapiens cDNA, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Fax: +55-11-2707001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rua Prof. Antonio Prudente 109, 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Contact: Simpson A.J.G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 M.J., Soares, F., Brentani, R.R., Reis, L.F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (bases 1 to 245)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       +55-11-2704922
                                                                                                                                                                                                          55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Natl.
                                                                                                                                                                                                 /note-"Organ: uterus_tumor; Vector: puc18; Site_1: SmaI; Site_2: SmaI, A mini-library was made by cloning products derived from ORESTES PCR (U.S. Letters Patent application No. 196,716 - Ludwig Institute for Cancer Research) profiles into the pUC 18 vector. Reverse transcription of tissue mRNA and cDNA amplification were performed under low stringency conditions."
                                                                                                                                                                                                                                                                                                                                                                        /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone_lib="UT0114"
/dev_stage="Adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Acad. Sci. U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GI:12305769
                                                                                                 Score 207; DB 10;
Pred. No. 4.2e-47;
1; Mismatches 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              97 (7),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            andar, 01509-010,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3491-3496 (2000)
                                                                                                                                        Length 245;
                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     de
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Souza, S.J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sao Paulo-SP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EST 18-JAN-2001
                                                                                                    0
                                                                                                 Gaps
                   166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     613
                                                                                                    0
                                  δã
닭
```

```
RESULT 13
BE664072
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QΥ
В
                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                      BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                  Query Match
Best Local S
Matchés 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           45
                                12 CCACCCAGAGCCATGGCTCCCCGAGGCTGCATCGTAGCTGTCTTTGCCATTTTCTGCATC
σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTTCACCCTTCTGTGAGATTTTCCATCATCTCAAGTTCTCTA 718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCTAGAATTCTGGACAGCATGAGATGCGTGTGCTGATGGGGGCCCAGGGACTCTGAACCC
CAATCCAGAGCCATGACTCCACGACGCTGCATCCTGGCTGTCTTGGCCGCTGTCTGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTTCACCCTTCTGTGAGATTTTCCATCATCTCAAGTTCTCTTCTA 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCTAGAATTCTGGACAGCATGAGATGCGTGTGCTGATGGGGGCCCCAGGGACTCTGAACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BE664072
BE664072.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Smith TPL USDA, ARS, US Meat Animal Research Center PO Box 166, Clay Center, NE 68933-0166, USA Tel: 402 762 4366
Fax: 402 762 4390
Email: smith@email.marc.usda.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Smith,T.P.L., Grosse,W.M., Freking,B.A., Roberts,A.J., Stone,F. Casas,E., Wray,J.E., White,J., Cho,J., Fahrenkrug,S.C., Bennet,G.L., Heaton,M.P., Laegreid,W.W., Rohrer,G.A., Chitko-McKown, Pertea,G., Holt,I., Karamycheva,S., Liang,F., Quackenbush,J. a Keele,J.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bos taurus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence evaluation of four pooled-tissue normalized bovine cDNA libraries and construction of a gene index for cattle Genome Res. 11 (4), 626-630 (2001)
                                                                                                                                                                                                                                                                                                                                         BACKWARD: GTTTTCCCAGTCACGACG Plate: 51 row: M column: 8 Seq primer: ATTTAGGTGACACTATAG
                                                                                                                                                                                                                                                                                                                                                                                                                            Single pass sequencing. Bases called and alt_trimmed with phred v0.980904.e. Vector identified by cross_match with the -minscore and _minmatch 12 options.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BE664072 554 bp mRNA linear 148225 MARC 4BOV Bos taurus cDNA 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COW
                                                                                                                                                                                                                                                                                                                                                                                               FORWARD: AGGAAACAGCTATGACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                 PCR PRimers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21180013
                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (bases 1 to 554)
                                                                                                                                                        128
                                                                    Conservative
                                                                                                                                                   Library made from pooled embryos."
154 c 138 g 134
                                                                                                                                                                                                                       /clone_lib="MARC 4BOV"
/tissue_type="pooled"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                         /organism="Bos taurus"
/db_xref="taxon:9913"
                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                          /note="Vector:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GI:10023165
                                                                                    24.8%;
                                                                    0
                                                                Score 189.2; DB 10;
Pred. No. 5.7e-42;
0; Mismatches 123;
                                                                                                                                                                                     pCMV SPORT6; Site_1: 1
rom pooled tissue from
                                                                                                                                                      134 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                 cross_match with the -minscore
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Roberts, A.J., Stone, R.T.,
                                                                    Indels
                                                                                                  Length
                                                                                                                                                                                      xbaI;
m day :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pecora; Bovoidea;
                                                                                                                                                                                      ; Site_2: 20 and da
                                                                                                      554;
                                                                    21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bennett
McKown,C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       25-APR-2001
                                                                                                                                                                                      2: xhoI;
day 40
                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    613
65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .G.,
                                                                    ۲
```

72 66

CTTTTGCTTCTGTTCACATGCTGCCCCAGTGTCCCCCCACAGGCACTCAGCTGTTGCTG

125

TCCAGGCTCCTCTGCTCACACGGAGCCCCCAGTGGCCCCCATGACTCCTTACCTGATGCTG

```
BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 14
BE664075
LOCUS
                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAAAGAGGCTGGTGTTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTGAAAGGTCAAAATTGTTACTCGGGTGTATCCTCAGACGATCGGGTTTGTGGCAGGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTGATAAACCAGAACTGCGACTCAGCCCGGGACCTCGGATGACAGGCTTTGTCGCAGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGCTTCAAGCAGTGCTGCCCGTGGTTGGTCAACAGGCCCCAGGAGTCCTTCGTGGTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TGCTTTGAGCAGTGCTGCCCCTG--------GACCTTCATGGTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GACGATGCCATGGTACCCTTGGGCAGGACCCGGAAGTGTGGGAACTGCACCTTTAGGGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GATGATGCCGTCGTGCCCTTGGCCAGAGCCCAGACGTGTGGAAACTGCACCTTCAGAGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCAAACGGAGGTCCTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAACCAGGAGGCACTCTGTGAATTCTGCAACCTCACATATTCTATCATGGCGGGATCGAT 425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGCCAGTCACAGAGCGATGCGGGGACCAGTTCTACGACCCCCGGCAGGACTGTTGCTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGCCAGCCACACAGAGATGTGGGGACAAGTTCTACGACCCCCTGCAGCACTGTTGCTAT
                                                                                                                                                                                                                                                                    Email: smith@email.marc.usda.gov
Single pass sequencing. Bases ca
v0.980904.e. Vector identified b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Smith,T.P.L., Grosse,W.M., Freking,B.A., Roberts,A.J., Stone,R.T., Casas,E., Wray,J.E., White,J., Cho,J., Fahrenkrug,S.C., Bennett,G.L., Heaton,M.P., Laegreid,W.W., Rohrer,G.A., Chitko:McKown,C.G. Pertea,G., Holt,I., Karamycheva,S., Liang,F., Quackenbush,J. and
                                                                                                                                                                              Seq
                                                                                                                                                                                                        BACKWARD: GTTTTCCCAGTCACGACG
                                                                                                                                                                                                                                                                                                                USDA, ARS, US Meat Animal Research Center
PO Box 166, Clay Center, NE 68933-0166, USA
Tel: 402 762 4366
Fax: 402 762 4390
                                                                                                                                                                                                                                                                                                                                                                                                            Sequence evaluation of four pooled-tissue normalized bovine cDNA libraries and construction of a gene index for cattle Genome Res. 11 (4), 626-630 (2001)
                                                                                                                                                                                                                         FORWARD: AGGAAACAGCTATGACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pertea,G., Holt,I.,
Keele,J.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bos taurus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            148231 MARC
BE664075
                                                                                                                                                                                                                                                                                                                                                                                  Contact: Smith TPL
                                                                                                                                                                                                                                                                                                                                                                                                      21180013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bovidae; Bovinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BE664075.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BE664075
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (bases 1 to 555)
                                                                                                                                                                                                                                         PRimers
      130
                                                                                                                                                                         ce: 51 row: N column: 8 primer: ATTTAGGTGACACTATAG
                                                                                                                                                                                                                                                        -minmatch 12 options.
    embryos.
a 157
                                                            /clone_lib="MARC 4BOV"
/tissue_type="pooled"
/lab_host="DH10B"
                          /note="Vector: pCMV SPORT6; Site
Library made from pooled tissue
mbryos "
                                                                                                            /organism="Bos taurus"
/db_xref="taxon:9913"
                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GI:10023171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4BOV
    O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bos taurus cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bos.
133 g
                          pCMV SPORT6; Site_1: xbaI; Site_2:
com pooled tissue from day 20 and d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        dq
                                                                                                                                                                                                                                                                  called and alt_trimmed with phred by cross_match with the -minscore
   135
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .
5
'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EST
                           and day 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ٠
ن
                                                                                                                                                                                                                                                                  18
```

```
DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                 SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 15
BF911379
LOCUS
                                                                                                                                                                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                      JOURNAL
MEDLINE
                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match 24.4
Best Local Similarity 67.3
Matches 289; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            411 GAAAGAGGCT 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          12 CCACCCAGAGCCATGGCTCCCCGAGGCTGCATCGTAGCTGTCTTTGCCATTTTCTGCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GATGATGCCGTCGTGCCCTTGGCCAGGACCCAGACGTGTGGAAACTGCACCTTCAGAGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTGAAAGGTCAAAATTGTTACTCGGCTGTATCCTCATACGATCGGGTTTGTGGCAGGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTGATAAACCAGAACTGCGACTCAGCCCGGGACCTCGGATGACAGGCTTTGTCGCAGTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGCTTTGAGCAGTGCCCCCTG-------GACCTTCATGGTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GACGATGCCATGGTACCCTTGGGCAGGACCCGGAAGTGTGGGAACTGCACCTTTACGGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGCCAGTCACAAGAGCGATGCGGGGACCAGTTCTACGACCCCCGGCAGGACTGTTGCTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGCCAGCCACACAAGAGATGTGGGGACAAGTTCTACGACCCCCTGCAGCACCACTGTTGCTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCAAACGGGT 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAACCAGGAGGCACTCTGTGAATTCTGCAACCTCACATATTCTATCATGGCGGGATCGAT 425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGCTTCGAGCACTGCTGCCCGTGGTTGGTCAACAGGCCCCATGAGTCCTTCGTGGTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTTTTGCTTCTCTGTTCACATGCTGCCCCAGTGTCCCCCACAGGCACTCAGCTGTTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCCAGGCTCTCTGCTCACACGGAGCCCCAGTGGCCCCCATGACTCCTTACCTGATGCTG
Email: asimpson@ludwig.org.br
This sequence was derived from the FAPESP/LICR Human Cancer Genome
Project. This entry can be seen in the following URL
(http://www.ludwig.org.br/scripts/gethtml2.pl?tl=IL2&t2=IL2-UT0073-
081100-213-D02&t3=2000-11-08&t4=1)
                                                                                                                                                                                                                                                                        1 (bases 1 to 201)
Dias Neto,E., Garcia Correa,R., Verjovski-Almeida,S., Briones,M.R.,
Nagai,M.A., da Silva,W. Jr., Zago,M.A., Bordin,S., Costa,F.F.,
Goldman,G.H., Carvalho,A.F., Matsukuma,A., Bata,G.S., Simpson,D.H.,
Brunstein,A., deOliveira,P.S., Bucher,P., Jongeneel,C.V., O'Hare,M.J., Soares,F., Brentani,R.R., Reis,L.F., de Souza,S.J. and
                                                                                                                                   Contact: Simpson A.J.G.
Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 an
                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            IL2-UT0073-081100-213-D02
BF911379
BF911379.1 GI:12302837
                                                                                                                                                                                                                                          Shotgun sequencing of the human transcriptome with ORF expressed
                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                     sequence tags
                                                                                         +55-11-2707001
                                                                                                       +55-11-2704922
                                                                                                                                                                                                                   Natl.
                                                                                                                                                                                                                     Acad.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             24.48;
                                                                                                                                                                                                                   Sci.
                                                                                                                                                                                                                                                                                                                                                                       Chordata; Craniata; Vertebrata; Euteleostomi; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 186; DB 10;
Pred. No. 4.4e-41;
0; Mismatches 120;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          201 bp
2 UT0073
                                                                                                                                                                                                                 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo
                                                                                                                                                                                                                (7),
                                                                                                                                   andar,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mRNA
                                                                                                                                                                                                                 3491-3496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sapiens
                                                                                                                                 01509-010,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 555;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CDNA,
                                                                                                                                 Sao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EST 18-JAN-2001
                                                                                                                                   Paulo-SP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             65
```

```
δõ
                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
ORIGIN
                                                                                                                            ş
                                                                                                                                                                       많
Search completed: November 3, 2002, 01:02:54
Job time : 1702 secs
                                                                                                                                                                                                                                                                                                                                           Query Match 22.5
Best Local Similarity 98.5
Matches 176; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       source
                                                                                 221 CCAGACGTGTGGAAACTGCACCTTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTT 280
                                                                                                                                                                                                                                                                                 161 GTTCTACGACCCCCTGCAGCACTGTTGCTATGATGATGCCGTCGTGCCCCTTGGCCAGGAC 220
                                                                                                                                                                       84 CCAGACGTGTGGAAACTGCACCTTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTT 143
                                                                                                                                                                                                                                                          24 GCTCTACGACCCCTGCAGCACTGTTGCTATGATGCCGTCGTGCCCTTGGCCAGGAC 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Seq primer: puc 18 forward
High quality sequence start: 13
High quality sequence stop: 201.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                          39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note="Organ: uterus_tumor; Vector: puc18; Site_1: SmaI; Site_2: SmaI; A mini-library was made by cloning products derived from ORESTES PCR (U.S. Letters Patent application No. 196,716 - Ludwig Institute for Cancer Research) profiles into the pUC 18 vector Reverse transcription of
                                                                                                                                                                                                                                                                                                                                                                                                                                                   tissue mRNA and cDNA amplification were performed under low stringency conditions."
63 c 51 g 48 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone_lib="UT0073"
/dev_stage="Adult"
                                                                                                                                                                                                                                                                                                                                                                  22.9%;
                                                                                                                                                                                                                                                                                                                                           Score 174.8; DB 10; Pred, No. 3.7e-38; 0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                      Length 201;
                                                                                                                                                                                                                                                                                                                                              0; Gaps
                                                                                                                                                                                                                                                                                                                                                0;
```

```
Minimum DB
Maximum DB
  000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Title:
Perfect score:
                                                                                                                                                                                                                                                                                                               000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ŏ
  on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score
30030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  seq length:
seq length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    383533 seqs, 122816752 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-092-297-5
763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     November 2, 2002, 23:01:37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Issued_Patents_NA:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTCCACTGCAACCACCCAGA.....ATAAATTTATGTACTTTATA 763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GenCore version 5.1.3 Copyright (c) 1993 - 2002 Compugen Ltd
  /cgn2_6/ptodata/1/ina/5A_COMB.seq:*
/cgn2_6/ptodata/1/ina/5B_COMB.seq:*
/cgn2_6/ptodata/1/ina/6A_COMB.seq:*
/cgn2_6/ptodata/1/ina/6B_COMB.seq:*
/cgn2_6/ptodata/1/ina/B_COMB.seq:*
/cgn2_6/ptodata/1/ina/BCTUS_COMB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ВB
                            US-09-199-637A-30
US-09-199-637A-12
US-09-199-637A-12
US-09-199-637A-1
US-08-597-495B-29
US-09-068-051A-31
US-08-203-905B-4
US-08-203-905B-4
US-08-276-531-45
US-08-276-531-45
US-08-276-531-45
US-08-460-900C-42
US-08-460-900C-42
US-08-460-900C-42
US-08-954-698-42
                                                                                                                                                                                                                                                                                                                                             US-09-128-155-16
US-09-128-155-17
US-09-439-313-526
US-08-465-980-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     '; Search time 48 Seconds
(without alignments)
3904.549 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             767066
                                                                                         Sequence
Sequence
Sequence
                                                                                                                                                                                                                 Sequence
Sequence
Sequence
                                                                                                                                                      Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Description
                                                  Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                 Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
Sequence
                                                                                                                                                                                               Sequence
                            Sequence
                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                          15, Appli

8, Appli

8, Appli

8, Appli

16, Appli

17, Appli

18, Appli

19, Appli

19,
```

0	0	0			n	0	0	0	^			C	C		_	. 0	. ^
4.5	44	. 4.	4.							35	34			<u> </u>			2 2
29.4	29.4	29.4	29.4	29.6	29.6	29.6	29.8	29.8	29.8	29.8	29.8	30.2	30.2	30.2	30.4	30.8	30.8
3.9	3.9				ω • •						3.9			4.0		. 4	٠.
1110	1083	1055	1055	2712	289	289	10367	10367	10367	2396	508	9599	9599	7218	2363	4434	4434
4	ш	4	N	2	4	4	տ	N		ω	ω	w	ω	_	4	٠.	4.
US-09-342-084-7	US-08-592-126-75	US-09-206-499-2	US-08-828-242-2	US-08-410-784A-1	US-09-244-796-17	US-09-007-005-17	PCT-US93-08041-9	US-08-886-642-9	US-08-110-300A-9	US-09-058-389A-10	US-09-058-389A-21	US-09-014-416-6	US-09-014-416-2	US-08-232-463-14	US-09-721-383-1	PCT-US95-13233-5	US-08-954-668-5
7, 7	Sequence 75, App	Sequence 2, Appl	Sequence 2, Appl	Sequence 1, Appl	Sequence 17, App	17,	Sequence 9, Appli	ဖ		Sequence 10, App	21	6	Sequence 2, Appl:	Sequence 14, App	Sequence 1, Appli	Sequence 5, Appl	Sequence 5, Appl

## ALIGNMENTS

Ouery Match 4.4%; Score 33.2; DB 1; Length 6244; Best Local Similarity 48.9%; Pred. No. 5.8; Matches 89; Conservative 0; Mismatches 93; Indels C	TYPE: nucleic acid ; STRANDEDNESS: both ; TOPOLOGY: both US-08-076-726-15	; SEQUENCE CHARACTERISTICS: ; LENGTH: 6244 base pairs	24	; TELEPAX: (202)371-2600 ; TELEPAX: (202)371-2540	TELECOMMUNICATION INFORMATION:	, 893	NAME: Esmond, Robert W.	CLASSIFICATION: 435	FILING DATE: 14-JUN-1993	APPLICATION NUMBER: US/08/076,726	LICATION DATA;	SOFTWARE: Patentin Release #1.0. Version #1.25	MEDIUM TYPE: Floppy disk	COMPUTER READABLE FORM:	$\simeq$	; STATE: District of Columbia	Washington	00 New York Avenue, N.W.	ADDRESSEE: Sterne, Kessler, Goldstein & For	6	Eucaryotic Cells by Tetracycline	; TITLE OF INVENTION: Tight Control of Gene Expression in	Gossen,	ON:	<pre>; sequence 15, Application US/08076726 ; Patent No. 5464758</pre>	RESULT 1 US-08-076-726-15/c	
																				•	esponsive	5					
Gaps 0;																					Promoters						

B 5

```
S
                                    В
                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q
                                                                                                        Query Match 4.4%;
Best Local Similarity 48.9%;
Matches 89; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                08-260-452-8/c
                                                                                                                                                                                                                                                                                                                                                                                        TELEFAX: (617) 227-59
NFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              equence 8,
                                                                                                                                                                                                       ORUSANISM: Human cytomegalovirus STRAIN: Towne (hCMV)
IMMEDIATE SOURCE:
                                    2733 GTTCAATGCTCATTAACAGGTTGATTAGAGGGGGAATTAACTGTATCTCTTGACTTGGAG 2674
                                                                                                                                                                                                                                                                 MOLECULE TYPE:
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/0
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ent No. 5650298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2673
                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                           TELECOMMUNICATION INFORMATION: TELEPHONE: (617) 227-7400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         532
412 AAAGAGGCTGGTGTTACCTGAGATCTGGGATGCTGAGTGGCTGTTTGGGGGGCCCAGAGAAA 471
                                                                 472 CACACACTCAACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCGCTGCCC 531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              412 AAAGAGGCTGGTGTTACCTGAGATCTGGGATGCTGAGTGGCTGTTTTGGGGGCCCAGAGAAA 471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII text
                                                                                                                                                                                                                                                                                                                    STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TLE OF INVENTION: Tight Control of Gene Expression TLE OF INVENTION: Cells by Tetracycline-responsive
                                                                                                                                                                                                                                                                                                        OPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IDDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ī
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TG 2552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGAGTGCTCTCATGACTCTGACTTTATTGAACTTTTTAAACTTTCGCCCTCCAAGGACCA 255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAAAAGTGATTCGTTGGCTTTCATTTGGAATGCCCACTGGCTGTGGGAGAGCAACAGCAT 261
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               02109-1875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       533
                                                                                                                                                                                                                                                                                                                                       nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Giulio A. DeConti, Jr. RATION NUMBER: 31,503
                                                                                                                                                                                               PUHD BGR3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Massachusetts
                                                                                                                                                                                                                                                                                                                                                     6244 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60 State Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Salfeld,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bujard, Hermann
                                                                                                                                                                                                                                                                                                      circular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              lication US/08260452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Lahive & Cockfield
                                                                                                                                                                                                                                                                                    DNA (genomic)
                                                                                                                                                                                                                                                                                                                      double
                                                                                                                                                                                                                                                                                                                                                                                                         227-5941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Jeffrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Manfred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Jochen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   08/076,327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US/08/260,452
                                                                                                                                                                                                                                                                                                                                                                                          8..
                                                                                                                                                                                                                                                                                                                                                                                                                                                               BBI-013CP
                                                                                                    Score 33.2; DB 1; Length 6244; Pred. No. 5.8; O; M1smatches 93; Indels 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    in Eucaryotic
                                                                                                      0;
                                                                                                    Gaps
                                                                                                      0
```

```
US-08-481-970-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 3
US-08-481-970-8/c
Query Match
Best Local Similarity, 48.9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 8, Application US/08481970 Patent No. 5859310
                                                                                                                                                                                                                                                   TELEFAX: (617) 227-59
NFORMATION FOR SEQ ID NO:
                                                                                                IMMEDIATE SOURCE:
                                                                                                                                              MOLECULE TYPE:
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2553 TG 2552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2673 AAAAAGTGATTCGTTGGCTTTCATTTGGAATGCCCACTGGCTGTGGGAGAGCAACAGCAT 2614
                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 08/2
FILING DATE: 14-JUN-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2613 CGAGTGCTCTCATGACTCTGACTTTATTGAACTTTTAAACTTTCGCCCCTCCAAGGACCA, 2554
                                                                                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE:
CLASSIFICATION: 800
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION DATA: APPLICATION NUMBER: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IITLE OF INVENTION: Animal Transgenic for a Tetracycline-Controlled
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                              ELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         472 CACACACTCAACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCGCTGCCC 531
                                                                                                                    STRAIN:
                                                                                                                                  ORGANISM:
                                                                                                                                                                                                                                                                                                                            REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                             TOPOLOGY:
                                                                                                                                                                                         STRANDEDNESS:
                                                                                                                                                                                                                                                                               TELEPHONE:
                                                                                                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE:
                                                                                                                                                                                                                        ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 02109-1875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Boston
                                                                                                                                                                                                       nucleic acid
                                                                                                                                                                                                                                                                                                                                           Giulio A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Massachusetts
                                                                                                               : Human cytomegalovirus
Towne (hCMV)
                                                                                                                                                                                                                    6244 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60 State Street, Suite 510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bujard, I
Salfeld,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ASCII text
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gossen,
                                                                                                                                                                            circular
                                                                                                                                                                                                                                                                                (617)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Lahive & Cockfield
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Floppy disk
                                                                                                                                                            DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                          14-JUN-1993
                                                                                                                                                                                           double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Jeffrey
                                                                                                                                                                                                                                                                 227-5941
                                                                                                                                                                                                                                                                                                                                          DeConti,
                          4.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hermann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Manfred
                                                                                                                                                                                                                                                                                                                                                                                       08/076,327
                                                                                                                                                                                                                                                                                                                                                                                                                                08/260,452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US/08/481,970
                                                                                                                                                                                                                                                                                                                            31,503
                                                                                                                                                                                                                                                    8
          Score 33.2; DE Pred. No. 5.8; 0; Mismatches
                                                                                                                                                                                                                                                                                                               BBI-013CP2
                                        DB 2;
                                      Length 6244;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Transc
```

밁

2733 GTTCAATGCTCATTAACAGGTTGATTAGAGGGGGGAATTAACTGTATCTCTTGACTTGGAG 2674

93;

Indels

0

Gaps.

```
ş
                                                                                                      CLONE: PUHD BGR3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                     Query Match
Best Local S
Matches 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 8, Application US/08897719 . Patent No. 5922927
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -08-897-719-8/c
                                                                                                                                                                                                                                                                                               TELEFAX: (617) 227-5941
NFORMATION FOR SEQ ID NO:
                                                                                                                          STRAIN: Towne (hCMV)
IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS:
LENGTH: 6244 base pair
                                                                                                                                                                                                                                                                                                                               TELEPHONE: (617) 227-7400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/897,719
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2553
                                                                                                                                                                                  MOLECULE TYPE:
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 08/0
FILING DATE: 14-JUN-1993
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2613
2673 AAAAAGTGATTCGTTGGCTTTCATTTGGAATGCCCACTGGCTGTGGGAGAGCAACAGCAT 2614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
ADDRESSEE: Lahive & Cockfield
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   412 AAAGAGGCTGGTGTACCTGAGATCTGGGATGCTGAGTGGCTGTTTGGGGGGCCAGAGAAA 471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ITLE OF INVENTION: Tight Control of Gene Expression in Eucaryotic Tight OF INVENTION: Cells by Tetracycline-responsive Promoters
                                                                                                                                                                 ORGANISM: Human cytomegalovirus
                                                                                                                                                                                                                                 STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: ASCII text
                                                                                                                                                                                                                    TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                           REGISTRATION NUMBER: 31,503
                                                                                                                                                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ដូ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGAGTGCTCTCATGACTCTGACTTTATTGAACTTTTTAAACTTTCGCCCTCCAAGGACCA 2554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CACACACTCAACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCGCTGCCC 531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TG 533
                                     1 Similarity
89; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2552
                                                                                                                                                                                                                                                                                                                                                                                               Giulio A. DeConti, Jr.
                                                                                                                                                                                                                                 nucleic acid
EDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              02109-1875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Massachusetts
                                                                                                                                                                                                                                                              6244 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60 State Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             USA
                                     Conservative
                                                                                                                                                                                                                    circular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bujard, Hermann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Salfeld,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gossen, Manfred
                                                                                                                                                                                               DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Jeffrey
                                                    4.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Jochen
                                                                                                                                                                                                                                                                                                                                                                                                                                              08/076,327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              08/260,452
                                                                                                                                                                                                                                                                                                   œ
...
                                     0;
                                                                                                                                                                                                                                                                                                                                                               BBI-013CP
                                                  Score 33.2;
Pred. No. 5.
                                     Mismatches
                                                  æ
                                                              DB 2;
                                   93;
                                                               Length 6244;
                                 Indels
                                 0;
                                 Gaps
                                 0
```

```
; IMMEDIATE SOURCE:
; CLONE: PUHD BGR3
US-09-163-269-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-163-269-8/c
 Query Match 4.4%;
Best Local Similarity 48.9%;
Matches 89; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 8, Application US/09163269 Patent No. 6252136
                                                                                                                                                                                                                                                            TELEFAX: (617) 227-594
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   tent No.
                                                                                                                                                         MOLECULE TYPE:
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: ASCII text CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2733 GTTCAATGCTCATTAACAGGTTGATTAGAGGGGGAATTAACTGTATCTCTTGACTTGGAG 2674
                                                                                                                                                                                                                                                                                                               REGISTRATION NUMBER: 31,503
REFERENCE/DOCKET NUMBER: BBI-013CP2
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 227-7400
                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 08/0 FILING DATE: 14-JUN-1993 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2553 TG 2552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2613 CGAGTGCTCTCATGACTCTGACTTTATTGAACTTTTTAAACTTTCGCCCTCCAAGGACCA 2554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2673 AAAAAGTGATTCGTTGGCTTTCATTTGGAATGCCCACTGGCTGTGGGAGAGCAACAGCAT 2614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          532 TG 533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     412 AAAGAGGCTGGTGTTACCTGAGATCTGGGATGCTGAGTGGCTGTTTGGGGGGCCAGAGAAA 471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          472 CACACACTCAACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCGCTGCCC 531
                                                                                                                                                                                                      STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CITY: Boston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COUNTRY:
                                                                                                                                                                                               COPOLOGY:
                                                                                                                                                                                                                                                ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INFORMATION:
                                                                                                                                                                                                                            nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        02109-1875
                                                                                                                                                                                                                                                                                                                                                                                  Giulio A. DeConti, Jr.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Massachusetts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60 State Street,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bujard, Hermann
Salfeld, Jochen
                                                                                                                                                                                           circular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gossen, Manfred
                                                                                                                                       Human cytomegalovirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Lahive & Cockfield
State Street, Suite 510
                                                                                                                                                                         DNA (genomic)
                                                                                                                                                                                                             double
                                                                                                                                                                                                                                                                                                7) 227-7400
227-5941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Jeffrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Animal Transgenic for a Tetracycline-Controlled : 10
                                                                                                                                                                                                                                                                                                                                                                                                                                        08/076,327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             us/09/163,269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            08/481,970
                                                                                                                                                                                                                                                                                  œ
Score 33:2; DI
Pred. No. 5.8;
0; Mismatches
                                DB 4;
                                Length 6244;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Transcri
```

0

93;

Indels

0;

Gaps

```
APPLICANT: OUFF, GORDON W.
APPLICANT: COX, ANGELA
APPLICANT: COX, ANGELA
APPLICANT: CAMP, NICOLA J.
APPLICANT: CAMP, NICOLA J.
APPLICANT: CAMP, NICOLA J.
APPLICANT: DIGIOVINE, FRANCESCO S.
TITLE OF INVENTION: DIAGNOSTICS AND THERAPEUTICS FOR DISEASES ASSOCIATED
FILE OF INVENTION: WITH AN IL-1 INFLAMMATORY HAPLOTYPE
FILE REFERENCE: MSA-010.02
CURRENT APPLICATION NUMBER: US/09/345/217
CURRENT APPLICATION NUMBER: US/09/345/217
EARLIER APPLICATION NUMBER: PST/GB98/01481
EARLIER FILING DATE: 1998-05-21
EARLIER FILING DATE: 1998-05-21
EARLIER FILING DATE: 1997-05-29
NUMBER OF SEQ ID NOS: 32
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 2
LENGTH: 9721
TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                            US-09-128-155-16/c
                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; OTHER INFORMATION: "n" bases throughout the sequence may be; OTHER INFORMATION: other or unknown US-09-345-217-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
GENERAL INFORMATION:
APPLICANT: Pan, Yang
TITLE OF INVENTION: NOVEL MOLECULES OF TANGO-77 RELATED PROTEIN FAMILY
TITLE OF INVENTION: AND USES THEREOF
FILE REFERENCE: 09404/052001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-345-217-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                         Sequence 16, Application US/09128155 Patent No. 6117654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 2, Application US/09345217 Patent No. 6268142 GENERAL INFORMATION:
                                                                                                                                                                                                                    6326 TATGGGGTCATTTGATGGACATGGCCTAACTGCCTGTGGGTTCTCTCTTCCTGTTGTTGA 638
                                                                                                                                                                                                                                                                                                                                                                             6266 CTCCCAGGACCATGTCCACCCAAGTCTCTTGGGCATAGTGCAGTGTCAATTCTTCCACAA 6325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2733 GTTCAATGCTCATTAACAGGTTGATTAGAGGGGGAATTAACTGTATCTCTTGACTTGGAG
                                                                                                                                                                                                                                                                                                                                     73 CCAGGCTCTCTGCTCACACGGAGCCCCAGTGGCCCCATGACTCCTTACCTGATGCTGT 132
                                                                                                                                                                                                                                                                                                                                                                                                                   13 CACCCAGAGCCATGGCTCCCCGAGGCTGCATCGTAGCTGTCTTTGCCATTTTCTGCATCT 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        532 TG 533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       352
                                                                                                                                                                                                                                                            GCCAGCCACACAGAGATGTGGGGACAAGTTCTACGACCCCCTGC 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CACACACTCAACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCGCTGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAAAAGTGATTCGTTGGCTTTCATTTGGAATGCCCACTGGCTGTGGGAGAGCAACAGCAT 2614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAAGAGGCTGGTGATCTGAGATCTGAGGTGGCTGTTTGGGGGGCCAGAGAA 471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CGAGTGCTCTCATGACTCTGACTTTATTGAACTTTTTAAACTTTCGCCCCTCCAAGGACCA 255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4.28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 32.2;
Pred. No. 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 83;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 9721;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             411
                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

```
; NAME/KEY: misc_feature
; LOCATION: (1)...(176373)
; OTHER INFORMATION: n = A.
US-09-128-155-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Db 122208 TATGGGGTCATTTGATGGACATGGCCTAACTGCCTGTGGGTTCTCTCTTCCTGTTGTTGA 122149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Db 122268 CTCCCAGGACCATGTCCACCCAAGTCTCTTGGGCATAGTGCAATGTCAATTCTTCCACAA 122209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-128-155-17/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; NAME/KEY: misc_feature
; LOCATION: (1)...(152331
; OTHER INFORMATION: n =
US-09-128-155-16
                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
APPLICANT: PAN, YANG
TITLE OF INVENTION: MOVEL MOLECULES OF TANGO-77 RELATED PROTEIN FAMILY
TITLE OF INVENTION: AND USES THEREOF
FILE REFERENCE: 09404/052001
CURRENT PELLOATION NUMBER: US/09/128,155
CURRENT FILING DATE: 1998-08-03
EARLIER APPLICATION NUMBER: US 60/091,650
EARLIER APPLICATION NUMBER: US 60/091,650
EARLIER APPLICATION NUMBER: US 60/054,646
EARLIER APPLICATION NUMBER: US 60/054,646
EARLIER FILING DATE: 1998-07-02
EARLIER TELLING DATE: 1997-08-04
Query Match
Best Local Similarity
Matches 82; Conserv
                                                                                                                                                                                                                                         SOFTWARE: EX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 17, Application US/09128155 Patent No. 6117654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 49.7
Matches 82; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ ID NO 16
LENGTH: 152331
TYPE: DNA
                                                                                                                                                                                                                                                                                    NUMBER OF SEQ
                                                                                                                                                                   TYPE: DNA
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/09/128,155 CURRENT FILING DATE: 1998-08-03 EARLIER APPLICATION NUMBER: US 60/091,650 EARLIER FILING DATE: 1998-07-02 EARLIER APPLICATION NUMBER: US 60/054,646 EARLIER FILING DATE: 1997-08-04
                                                                                                                                                               FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQ ID NOS: 18
SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                                                                                        ENGTH: 176373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM: Homo sapiens FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13 CACCCAGAGCCATGGCTCCCCGAGGCTGCATCGTAGCTGTCTTTGCCATTTTCTGCATCT 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 73 CCAGGCTCTCTGCTCACACGGAGCCCCCAGTGGCCCCATGACTCCTTACCTGATGCTGT 132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCCAGCCACACAGAGATGTGGGGACAAGTTCTACGACCCCCTGC 177
                                                                                                                                                                                                                                                            EastSEQ for Windows Version
                                                                                                                                                                                                                                                                                    ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4.28;
                 4.2%;
                                                                                               A,T,C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A,T,C
                                                                                               or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       or
              Score 32.2;
Pred. No. 39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 32.2;
Pred. No. 37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                  DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   83;
                               Length 176373;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 152331;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
```

0;

Db 138290 CTCCCAGGACCATGTCCACCCAAGTCTCTTGGGCATAGTGCAATGTCAATTCTTCCACAA 138231

13 CACCCAGAGCCATGGCTCCCCGAGGCTGCATCGTAGCTGTCTTTGCCATCTTTCTGCATCTT2

Conservative

0;

Mismatches

83;

Indels

0;

0

138230 TATGGGGTCATTTGATGGACATGGCCTAACTGCCTGTGGGTTCTCTCTTCTTCTTGTTGA 138171

CCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCATGACTCCTTACCTGATGCTGT 132

밁

138170 GGCTGAAACAAGAGTGCTGGAGCGATAATGTGTCCATCCCCCTCC 138126

133 GCCAGCCACACAAGAGTGTGGGGACAAGTTCTACGACCCCCCTGC

```
; SEQ ID NO.526
; LENGTH: 963
; TYPE: DNA
; ORGANISM: Homo sapiens
US-09-439-313-526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                  US-08-465-980-1/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4.2%;
Best Local Similarity 49.1%;
Matches 84; Conservative
                                                                                                                                                                                                                                                                                       Sequence 1, Application US/08465980 Patent No. 5756309 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -09-439-313-526/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT FILING DATE: 1999-11-12
NUMBER OF SEQ ID NOS: 575
SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION NUMBER: US/09/439,313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THERAPY AND ITLE OF INVENTION: DIAGNOSIS OF PROSTATE CANCER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PPLICANT:
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                 CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                          390 GCGCAGTGGGTGGCAGATGGCCACATAACGGTCAAAGGCCATGGCCAGCAG 340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 153 GGGGACAAGTTCTACGACCCCCTGCAGCACTGTTGCTATGATGATGCCGTCGTGCCCCTTG 212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       UMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                               213 GCCAGGACCCAGACGTGTGGAAACTGCACCTTCAGAGTCTGCTTTGAGCAG 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
                                                                                                        STREET:
                                                                                                                           ADDRESSEE: CARELLA, BYRNE, BAIN, GILFILLAN, CECCHI
ADDRESSEE: STUART 6 OLSTEIN
                                                                                                                                                                                                     E OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCGGACCACACCATGCCAATCTGGGCTGTTACTGTATTGTTGAGCACTGCAGCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORMAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    526, Application US/09439313
), 6329505
                                                                                         Roseland
                                       07068
                                                                          New Jersey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Dillon, Davin C.
Mitcham, Jennifer L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Reed, Steven G.
Kalos, Michael
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Harlocker, Susan Louise
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fanger, Gary
Retter, Mark
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Jiang Yuqui
                                                                                                        6 Becker Farm Road
                                                                                                                                                                                                                     Rosen, Craig A. Ruben, Steven M
                                                                                                                                                                                                                                                                        Soppet, Daniel R.
                                                       USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Jiangchun
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Craig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                John
                                                                                                                                                                                                     HUMAN G-PROTEIN RECEPTOR HPRAJ70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 31.8; D. Pred. No. 7.2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              87;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; LOCATION:
US-08-465-980-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      us-09-053-303-1/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 45...
"""" hes 84; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 1,
                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                   tent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
LENGTH: 1474 base pair
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION DATA:
                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0.
                                                                                                                                                                                                                                                                                                   CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELECOMMUNICATION INFORMATION: TELEPHONE: 201-994-1700
            FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
                                                                                   CURRENT APPLICATION DATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    663 GCGCAGTGGGCAGATGGCCACATAACGGTCAAAGGCCATGGCCAGCAG 613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   213 GCCAGGACCCAGACGTGTGGAAACTGCACCTTCAGAGTCTGCTTTGAGCAG 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    723 GCGGACCACAGCCACGATGCCAATCTGGGCTGTTACTGTATTGTTGAGCACTGCAGCATG 664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   153 GGGGACAAGTTCTACGACCCCCTGCAGCACTGTTGCTATGATGATGCCGTCGTGCCCTTG 212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: FILING DATE: 06-JUI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE:
                                                                                                                                                                                                                CITY: Roseland
STATE: New Jersey
                                                                                                                                                                                                                                                              ADDRESSEE: CARELLA, BYRNE, I
ADDRESSEE: STUART & OLSTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OPERATING SYSTEM:
                                                                                                                                                                                                  COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REGISTRATION NUMBER:
APPLICATION NUMBER:
                                                                APPLICATION NUMBER:
                                                                                                                                                                                  07068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           : 1474 base pairs nucleic acid
                                                                                                                                                                                                                                                6 Becker Farm Road
                                                                                                                                                                                                                                                                                                                                              Rosen, Craig &
Ruben, Steven
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              201-994-1744
                                                                                                                                                                                                  USA
                                                                                                                                                                                                                                                                                                                                                                                             Soppe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PatentIn Release #1.0, Version #1.30
                                                                                                 PatentIn Release #1.0, Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                   lication US/09053303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              06-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        single
                                                                                                                                                                                                                                                                                                                                                                                                  t, Daniel R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gregory
                                                                                                                                                                                                                                                                                                                                                                   Craig A.
                                                                                                                                                                                                                                                                                                                                  HUMAN G-PROTEIN RECEPTOR HPRAJ70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4.28;
                                                                US/09/053,303
                                                                                                                                                                                                                                                                                 BYRNE, BAIN, GILFILLAN, CECCHI,
US 08/465,980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US/08/465,980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             36,134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 31.8; D
Pred. No. 8.4;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               325800-446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        87; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 1474;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Gaps
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                            PCT-US95-07093-1/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; LOCATION:
US-09-053-303-1
                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 1, Application PC/TUS9507093 GENERAL INFORMATION:
                        APPLICATION NUMBER: US 08/
FILING DATE: 06-JUN-1995
ATTORNEY/AGENT INFORMATION:
NAME: FEITATO, Gregory D.
REGISTRATION NUMBER: 36,13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
Matches 84; Conserv
                                                                                           PRIOR APPLICATION DATA:
                                                                                                                                         SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
REGISTRATION NUMBER: 36,134
REFERENCE/DOCKET NUMBER: 32
ELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                 MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEFAX: 201-994-1744
INFORMATION FOR SEQ ID NO:
                                                                                                              CLASSIFICATION:
                                                                                                                        FILING DATE:
                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                      COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           153 GGGGACAAGTTCTACGACCCCCTGCAGCACTGTTGCTATGATGATGCCGTCGTGCCCTTG 212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE:
                                                                                                                                                                                                                                            COUNTRY:
                                                                                                                                                                                                                                                                                  STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE: CARELLA, BYRNE, I
ADDRESSEE: STUART & OLSTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              93 GGAGCCCCAGTGGCCCCCATGACTCCTTACCTGATGCTGTGCCAGGCCACAGAGAGATGT 152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRANDEDNESS: SI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME: Ferraro, Gregory D.
REGISTRATION NUMBER: 36,134
REFERENCE/DOCKET NUMBER: 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCGCAGTGGGTGGCAGATGGCCACATAACGGTCAAAGGGCCATGGCCAGCAG 613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCCAGGACCCAGACGTGTGGAAACTGCACCTTCAGAGTCTGCTTTGAGCAG 263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCGGACCACCACCACGATGCCAATCTGGGCTGTTACTGTATTGTTGAGCACTGCAGCATG
                                                                                                                                                                                                                                 07068
                                                                                                                                                                                                                                                     Roseland
New Jersey
                                                                                                                                                                                                                                                                                                                                                  INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           nucleic acid
                                                                                                                                                                                                                                                                          6 Becker Farm Road
                                                                                                                                                                                                                                            USA
                                                                                                                                                                                                                                                                                                                                                            Rosen, Craig A. Ruben, Steven M.
                                                                                                                                                                                                                                                                                                                                                                                                   Soppet, Daniel R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CDS
274..1233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   single
                                                                                                                                                                                                                                                                                                                                       HUMAN G-PROTEIN RECEPTOR HPRAJ70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4.2%;
                                                                             US 08/465,980
                                                                                                                                PCT/US95/07093
               325800-446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                       BAIN,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 31.8; D;
Pred. No. 8.4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        325800-446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                    GILFILLAN, CECCHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                87;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 1474;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                           밁
                                                 Ω
                                                                             밁
                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20
```

```
US-09-199-637A-30
                                                                                                                                                                                                SOFTWARE: FastSEQ for Windows Ver
SEQ ID NO 30
LENGTH: 798
TYPE: DNA
ORGANISM: Pseudomonas aeruginosa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-199-637A-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 13
                                                                                                                                                Query Match
Best Local Similarity
                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PCT-US95-07093-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 30,
                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: 60/0 PRIOR FILING DATE: 1997-11-25
                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/09/199,637A CURRENT FILING DATE: 1998-11-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Patent No.
                                                                                                                                                                                                                                                                             NUMBER OF SEQ ID NOS;
                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Drenkard, Eliana
APPLICANT: Tsongalis, John
TITLE OF INVENTION: VIRULENCE-ASSOCIATE
TITLE OF INVENTION: SEQUENCES AND USES
                                                                                                                                                                                                                                                                                                                                                 FILE REFERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                        PPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: 201-994-1744
INFORMATION FOR SEQ ID NO:
209 CTTG 212
                            361
                                     149 ATGTGGGGACAAGTTCTACGACCCCCTGCAGCACTGTTGCTATGATGATGCCGTCGTGCC 208
                                                                  301 ATACCTCGTCCGTGTGGTTCCCCCGAGTCTCTACCTGGCCCTGGCCATGACCGAAAACGA 360
                                                                                            SEQUENCE CHARACTERISTICS:
LENGTH: 1474 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      153 GGGGACAAGTTCTACGACCCCCTGCAGCACTGTTGCTATGATGATGCCCGTCGTGCCCTTG 212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY:
             AGAAAAGAACCAGCGCTACAACATCATGCAAGCCACCGGCTGCGACGAGGTCGAGGCGGC 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCGCAGTGGGTGGCAGATGGCCACATAACGGTCAAAGGCCATGGCCAGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCCAGGACCCAGACGTGTGGAAACTGCACCTTCAGAGTCTGCTTTGAGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCGGACCACAGCCACGATGCCAATCTGGGCTGTTACTGTATTGTTGAGCACTGCAGCATG
                                                                                                                                        66;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        84;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6355
                                                                                                                                                                                                                                                          FastSEQ for Windows Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                           Ausubel, Frederick
Goodman, Howard M.
Rahme, Laurence G.
Mahajan-Miklos, Shalina
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Application US/09199637A
                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                              00786/361002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CDNA
                                                                                                                                                                                                                                                                                                                                                                 VIRULENCE-ASSOCIATED NUCLEIC ACID
                                                                                                                                                4.1%;
                                                                                                                                                                                                                                                                                                                   1998-11-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 4.2%;
                                                                                                                                                                                                                                                                                                    60/066,517
                                                                                                                                   0;
                                                                                                                                             Score 31.2;
Pred. No. 9.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 31.8; D. Pred. No. 8.4;
                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                        THEREOF
                                                                                                                                                           DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              87;
                                                                                                                                                        Length 798;
                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 1474;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            613
                                                                                                                            0;
                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               664
                                                                                                                         0
```

CTTG 424

09-199-637A-28/c

tent No.

28, Application US/09199637A ). 6355411

INFORMATION:

0

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                        SOFTWARE: Fast
SEQ ID NO 12
LENGTH: 3141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; SOFTWARE: FastSEQ for Windows Ve;
; SEQ ID NO 28
; LENGTH: 1407
; TYPE: DNA
; ORGANISM: Pseudomonas aeruginosa
US-09-199-637a-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ESULT 15
/S-09-199-637A-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local 9
                                                                                                      APPLICANT: Drenkard, Eliana
APPLICANT: Drenkard, John
TITLE OF INVENTION: VIRULENCE-ASSOCIATED NUCLEIC ACID
TITLE OF INVENTION: SEQUENCES AND USES THEREOF
FILE REFERENCE: 00786/361002
CURRENT FILING DATE: 1998-11-25
PRIOR APPLICATION NUMBER: 60/066,517
PRIOR APPLICATION NUMBER: 60/066,517
PRIOR FILING DATE: 1997-11-25
                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 12, Application US/09199637A
Patent No. 6355411
                                                                                                    NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: 60/0
PRIOR FILING DATE: 1997-11-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           UMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 URRENT APPLICATION NUMBER: US/09/199,637A
URRENT FILING DATE: 1998-11-25
)RGANISM: Pseudomonas aeruginosa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ILE REFERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               328 CTTG 325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     388 AGAAAAGAACCAGCGCTACAACATCATGCAAGCCACCGGCTGCGACGAGCTCGAGGCGGC 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   149 ATGTGGGGACAÄGGTTCTAGGACCCCCTGCAGCACTGTTGCTATGATGATGCCGTCGTGCC 208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     209 CTTG 212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LE OF INVENTION: VIRULENCE-ASSOCIATED NUCLEIC ACID LE OF INVENTION: SEQUENCES AND USES THEREOF ERFERENCE: 00786/361002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity 53.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATACCTCGTCCGTGTGCTTCCCCCGAGTCTCTACCTGGCCCTGGCCCATGACCGAAAACGA 389
                                                                            FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                            Goodman, Howard M.
Rahme, Laurence G.
Rahajan-Miklos, Shalina
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Goodman, Howard M.
Rahme, Laurence G.
Mahajan-Miklos, Shalina
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tsongalis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Drenkard, Eliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ausubel,
                                                                                                                                                                                                                                                                                                                Man-Wah
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Man-Wah
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Frederick
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/066,517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 31.2;
Pred. No. 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 4; Length 1407;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             58; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,
```

US-09-199-637A-12

```
밁
                                                                                                               밁
                                                                                 ş
                                                                                                                                                   Query Match
Best Local Similarity 53.2
Matches 66; Conservative
                                                                                                         2925 ATACCTCGTCGGTGTGGTTCCCCCGAGTCTCTACCTGGCCCTGGCCATGACCGAAAACGA 2984
3045 CTTG 3048
                                                   2985 AGAAAAGAACCAGCGCTACAACATCATGCAAGCCACCGGCTGCGACGAGGTCGAGGCGGC 3044
                                                                             149 ATGTGGGGACAAGTTCTACGACCCCCTGCAGCACTGTTGCTATGATGATGCCGTCGTGCC 208
                           209 CTTG 212
                                                                                                                                   4.1%;
                                                                                                                                                                     0;
                                                                                                                                                                                Score 31.2;
Pred. No. 17;
                                                                                                                                                                     Mismatches
                                                                                                                                                                                            DB 4; Length 3141;
                                                                                                                                                                     58;
                                                                                                                                                                   Indels
                                                                                                                                                                0; Gaps
```

Search completed: November Job time: 257 secs 2, 2002, 23:18:35 밁

```
Command line parameters:

-MODEL-frame+_p2n.model -DEV-xlh
-O-/cgn2_1/USPTO_spoo1/US09092297/runat_29102002_093923_21750/app_guery.fasta_1.263
-O-/cgn2_1/USPTO_spoo1/US09092297/runat_29102002_093923_21750/app_guery.fasta_1.263
-DB=GenEmbl -OFMT-fastap -SUFFIX-P2n.rge -MINMATCH-0.1 -LOOPCL-0 -LOOPEXT-0
-UNITS-bits -START-1 -END--1 -MATRIX-blosum62 -TRANS-human40.cd1 -LIST-45
-DOCALLGN-200 -THR_SCORE-pct -THR_MAX-100 -THR_MIN-0 -ALIGN-15 -MODE-LOCAL
-OUTFMT-pto -NORM-ext -HEAPSIZE-500 -MINLEN-0 -MAXLEN-2000000000
-USER-US09092297_eCGN_11_1182_erunat_29102002_093923_21750 -NCPU-6 -ICPU-3
-NO_XLPXY -NO_MMAP -LARGEQUERY -NEG_SCORES-0 -MAIT -LONGLOG -DEV_TIMEOUT-120
-WARN_TIMEOUT-30 -THREADS-1 -XGAPOP-10 -XGAPEXT-0.5 -FGAPOP-6 -FGAPEXT-7
-YGAPOP-10 -YGAPEXT-0.5 -DELOP-6 -DELEXT-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OM protein - nucleic search, using frame_plus_p2n model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Xgapop 10.0 , Xgapext
Ygapop 10.0 , Ygapext
Fgapop 6.0 , Fgapext
Delop 6.0 , Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-092-297-17
668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GenEmbl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  November 3, 2002, 03:02:24; Search time 1822 Seconds (without alignments) 1343.801 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1797656 seqs, 10463268293 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 PLQPPRAMAPRGCIVAVFAI.....INQNCDSARTSDDRLCRSVS 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GenCore version 5.1.3 Copyright (c) 1993 - 2002 Compugen Ltd.
                                                                                                                                                                                                                                                     gb_pr:*
gb_ro:*
gb_sts:*
gb_sy:*
gb_un:*
gb_v1:*
em_ba:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gb_htg:*
gb_in:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gb_ba:*
em_mu:*
em_on:*
em_or:*
em_ov:*
em_pat:*
em_ph:*
em_pl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                              sp_bh:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gb_pat:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gb_ov: •
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gb_om:*
                                                                                                                                                                                                                                                                                                                                                                                                                      3b_pl:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0.5
7.0
7.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3595312
```

29: em\_\vi:\*
30: em\_htg\_lnv:\*
31: em\_htg\_lnv:\*
32: em\_htg\_other:\*
33: em\_htgo\_inv:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

c	٠ ،	)				ი	ი			O		c	)	c	,		(	3 (	י כ	כ						o	ဂ	ဂ		o		ი			O	ი	O		o				O				;	Res	
40	1	- #		2	4 )	40	39	38	37	6	, L	4 1	2 6	3 6	) ( ) F	ט נ	9 6	) t	သ <u>၊</u>	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12		10	·	œ	7	σ	G	4-	·w	K	, 1		Result No.	
·	٦.	о о л с	л (	л,	86	86	86	86	80	86	α	α	0 0	٥.	٠.	0 C	u c	n :	Λ.	87	 	7	7		7.	m	8	88.5	œ		89	89	9		٠.	4		19		w	ω	ω	8		6	899		Score	
:				D (	٥	.9	۰. ب	2.9	2.9	2.9			٠,	٠,	٠,	, ,		١, د	ى د	٠,	۱ ر ا د	w	13.1	13.1	ω.	ω.	ω.	ω.	ω.	w	Ü	ω.	ω.	Ψ	ω.	٠.	4.	9	9	'n	5	ŗ	43.3	9				Query Match	ď
ىد	1977		17.04	7754	6263	1460	9995	8519	338	6186	534		0	) \ ! !  -	1 1		7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	3 0	2000	9 6	1474	980	9304	2	36	9	79	7027	6325	219	2261	3890	7036	019	832	562	740	650	650				46		77	762	-	Length	
~	١.	ט ע	) N	) t	s i	N	N	N	N	N	N	L	ی د	y c	) K	۸ (	ט נ	y u	D U	9 6	5'	<b>.</b>	Ŋ	ø	10	ഗ	σ	ø	N	N	10	10	Ь	_	N	N	N	ø	9	φ	σ	6	9	9	σ	σ	:	DВ	
AC08/106	00809	AC003695	00000	2000	л ( Д (	9894	58973	07400	9607	10330	588	0582	1/683	5	00115	00238	0 L 4 L	77/04	11071		1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	10960	٠ د	01174	<b>0760</b>	呂	346	051	459	41	026	07376	025	054	0875	0941	0949	77	7	98	556	5	0	290	1641	AX014140		ID	
AC087106 I	_			٠.		-,	٠, ,	_	w	_	_	ď	2		-			···	, 5			100000	03348	11746	76007	402 F.	AX234657	55094	45992	AC074167	AC026385	AC073761	AP002562	05499	87564	94152	94931	07785	07785	AX118905	AX055696	055440	007193	006262	AX164131	AX014140		Descripti	
īΛ	Homo sapi	Homo sapi	. 5	in C	500		٥,	mo sa	ttus	8	=	habd	Homo sapi	sap	sap	m	sap	מטמ		sum su	יונצ	, 5	י ני ני		ns musc	rubripe	Sequenc	Human ch	Homo	Mus muscu	Mus musc	3		ES	Ö	Rattu	Rattus no	Homo	Homo	Sequenc	Sequenc	Sequence	Homo s	Homo sa	Sequenc	Sequenc		ion	

## ALIGNMENTS

AX014140 AX014140 LOCUS DEFINITION Sequence 3 ACCESSION AX014140 VERSION AX014140.1 KEYWORDS SOURCE human. ORGANISM Homo sapleni	TESCLE 1
AX014140 762 bp DNA linear PAT 07-SEP-2000 Sequence 3 from Patent W09954447. AX014140 GI:10040587 human. Homo sapiens	

```
DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                              RESULT 2
AX164131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
Best Local Similarity:
Query Match:
                                                          FEATURES
                                                                                                                                                                                                         SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-092-297-17 (1-117) x AX014140
                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                       KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred: No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BASE COUNT
                                                                                                                                                                                                                                                                                                COCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
JOURNAL
                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                          303
                                                                                                                                                                                                                                                                                                                                                                                      101
                                                                                                                                                                                                                                                                                                                                                                                                                   243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       123
                                                                                                                                                                                                                                                                                                                                                                                                                                                 81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PheArgValCysPheGluGlnCysCysProTrpThrPheMetValLysLeuIleAsnGln 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CysCysTyrAspAspAlaValValProLeuAlaArgThrGlnThrCysGlyAsnCysThr 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LeuMetLeuCysGlnProHisLysArgCysGlyAspLysPheTyrAspProLeuGlnHis 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PheCysIleSerArgLeuLeuCysSerHisGlyAlaProValAlaProMetThrProTyr 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTGATGCTGTGCCAGCCACACAGAGATGTGGGGGACAAGTTCTACGACCCCCTGCAGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCATGACTCCTTAC
                                                                                                                                                                            Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                   Sequence 3
AX164131
                                                                      Genentech,
                                                                                                                  Compositions and methods for the treatment of immune related
                                                                                                                              Fong,S., Goddard,A., Godowski,P.J., Grimaldi,C.J.,
Hillan,K.J., Tumas,D., Watanabe,C.K., Wood,W.I. and
                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                     AX164131.1
                                                                                                                                                                                                                                                                                                AX164131
                                                                                    Patent: WO 0140465-A 3 07-JUN-2001;
                                                                                                    diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human nucleic acid sequences of bla
Patent: WO 9954447-A 3 28-OCT-1999;
SCHMITT ARMIN (DE); SPECHT THOMAS (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (DE);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 (bases 1 to 762)
Schmitt,A., Specht,T., Dahl,E., Hinzmann,B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                             nmalia; Eutheria; (bases 1 to 771)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (DE); ROSENTHAL ANDRE (DE); METAGEN GES FUER GENOMFORSCHUN PILARSKY CHRISTIAN (DE) LOCALLON/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ρ
          /organism="Homo sapiens"
/db_xref="taxon;9606"
                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
/db_xref="taxon:9606"
232 c 194 g 17
                                                                                                                                                                                                                                                                               from
                                                                                                                                                                                                                                                     GI:14545080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6.14e-61
668.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                               771 bp
Patent W00140465
                                                                                                                                                                         Chordata; Craniata; Vertebrata; Euteleostomi; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (1-762)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                174 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 bladder tumour tissue
                                                                                                                                                                                                                                                                                              DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           762
117
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Rosenthal, A.
                                                                                                                                             Gurney, A.L.,
                                                                                                                                                                                                                                                                                             PAT 22-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     62
                                                                                                                                            JOURNAL
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
VERSION
KEYWORDS
                                                                REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 3
AC006262
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       γ
                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-092-297-17 (1-117) x AX164131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment
                                                                                                                                                                                                                    TITLE
                                                     JOURNAL
                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AsnCysAspSerAlaArgThrSerAspAspArgLeuCysArgSerValSer 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PheArgValCysPheGluGlnCysCysProTrpThrPheMetValLysLeuIleAsnGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CysCysTyrAspAspAlaValProLeuAlaArgThrGlnThrCysGlyAsnCysThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGTTGCTATGATGCCGTCGTCGCCCTTGGCCAGGACCCAGACGTGTGGAAACTGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LeuMetLeuCysGlnProHisLysArgCysGlyAspLysPheTyrAspProLeuGlnHis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PheCysIleSerArgLeuLeuCysSerHisGlyAlaProValAlaProMetThrProTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCTGATAAACCAG
Submitted (21-SEP-2001) Joint Genome Institute, Lawrence Livermore National Laboratory, 7000 East Ave., Livermore, CA 94551, USA On Sep 21, 2001 this sequence version replaced gi:4079612.

Map and sequence oriented from centromere to q telomere. BC264576
                                                                                          Direct Submission
Submitted (30-DEC-1998) Joint Genome
National Laboratory, 7000 East Ave.,
3 (bases 1 to 107573).
                                                                                                                                                                                                             Lamerdin, J.E., McCready, P.M., Skowronski, E., Viswanathan, V., Burkhart-Schultz, K., Gordon, L., Dias, J., Ramirez, M., Stilwagen, S., Phan, H., Velasco, N., Do, L., Regala, W., Terry, A., Garnes, J., Danganan, L., Erler, A., Christensen, M., Georgescu, A., Avila, J., Liu, S., Attix, C., Andreise, T., Trankheim, M., Amico-Keller, G., Coefield, J., Duarte, S., Lucas, S., Bruce, R., Thomas, P., Quan, G., Kronmiller, B., Arellano, A., Sanders, C., Ow, D., Nolan, M., Trong, S., Kobayashi, A., Olsen, A.S. and Carrano, A.V. Sequence analysis of a 1.9 Mb region in 19q13.2 between APOE and
                                                                  Direct Submission
                                                                                 Lamerdin, J.E
                                                                                                                                                       2 (bases 1 to 107573)
Lamerdin, J.E.
                                                                                                                                                                                  Unpublished
                                                                                                                                                                                                     Sequence analysis D19S412
                                                                                                                                                                                                                                                                                                                                                   Mammalia; Eutheria; Pr
1 (bases 1 to 106320)
                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata;
                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                            AC006262.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6.21e-61
668.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                           GI:15718550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       chromosome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                 Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    107573 bp
ne 19, BAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (1-771)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ۵
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                            Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA
BC264576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        176
                                                                                                           Institute,
Livermore,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear PR:
(CTC-297N14),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   771
117
0
0
0
                                                                                                          Lawrence Livermore CA 94551, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21-SEP-2001
```

100 242 80

3.02

40

62

122

182

```
FEATURES
misc_feature
                                                             misc_feature
                                                                                              repeat_region
                                                                                                                                             misc_feature
                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   overlaps BC282485 (CTC-344H19, AC007785) to the left from bases 1 to 20,296 of this accession, and overlaps BC82621 (CTB-139A18, AC007193) to the right from bases 106,317 to 107,573 of this accession. This sequence does not represent the entire insert of BC264576. Additional chromosome 19 map and sequence information may be obtained at: http://www-bio.llnl.gov/bbrp/genome/genome.html.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         complement(2206...2495)
/rpt_family="AluJo"
complement(2497...2728)
/rpt_family="LIMA7"
complement(2730...3133)
                                                                                          /note="predicted exon, program: grail2exons_human_1.3,
frame: 1, quality: excellent, score: 75.000"
11326 .11517
                                                                                                                                          /rpt_family="AluSg"
complement(10866.
                                                                                                                                                                            complement(9736. .. 10038)
                                                                                                                                                                                                                              complement(7661. .7916)
/rpt_family="L1"
                                                                                                                                                                                                                                                                                               complement(7150. .7485)
/rpt_family="L1"
                                                                                                                                                                                                                                                                                                                            complement(7059. .7080)
/rpt_family="AT_rich"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /rpt_family="AluJb"
complement(3448. .3)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /rpt_family="(GGGA)n"
complement(1035. .201
/rpt_family="L1MB7"
                                                                                                                                                                                                                                                                                                                                                                            complement(5974.
                                                                                                                                                                                                                                                                                                                                                                                                                complement(5370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             complement(4826.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               complement (2014
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         complement(829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             complement (669.
           note="DDS similarity to AA456254 zx99d06.r1 Soares with the sapiens cDNA clone 811883 5'; (216. .269); 00% identity."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note="DDS similarity to AA456254 zx99d06.r1 Soares
vhHMPuS1 Homo sapiens cDNA clone 811883 5'; (3. .215); 100%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /cell_type="fibroblast"
/note="LLNL clone name: BC264576
from Research Genetics."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /map~"19q13.2 between APOE and D19S412"
/clone="CTC-297N14"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /organism="Homo sapiens"
/db_xref="taxon:9606"
/chromosome="19"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'cell_line⇒"978SK"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         t_family="(GA)n"
tlement(870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            __family="AluJo"
lement(4110
                                                                                                                                                                                                 _family="L1"
                                                                                                                                                                                                                                                           _family="FLAM_C"
                                                                              _family="AluJo"
                                                                                                                                                                                                                                                                                                                                                                                                                           _family="(TA)n"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             _family="L1MB7"
|ement(4896
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              _family="L1MB7"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           _family="LlMB7"
                                                                                                                                                                                                                                                                                                                                                                                                                                                family="L1M1"
ement/5070
                                                                                                                                                                                                                                                                                                                                           family="Aluy"
ement(7050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            _tamily="LlMA7"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              'Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                 "L1PA8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .2017)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .2202)
                                                                                                                                             .10964)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BAC library obtained
                                                      repeat_region
                                                                                       repeat_region
                                                                                                                       repeat_region
                                                                                                                                                      repeat_region
                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                         misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       misc_feature
                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                       /rpt_fam1
28987..2
                                                                                                                       complement
                                                                                  rpt_family="AluSg" 17743...28177
                                                                  rpt_family-"L1M1/2"
                                                                                                                                                                                                                                                                        _fami
     family="(TA)n"
                       .29070
                                   Lly-"Alusx"
```

```
complement(23090. .23194)
/note="predicted exon, program: grail2exons_human_1.3,
/rame: 2, quality: good, score: 50.000"
complement(24023. .24141)
                                               complement (27078.
                                                                                          /rpt_family-"AT_rich" complement(26677. .26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note="DDS similarity to overlapping ESTs:
(12603...12818) AA454642 zx99d06.s1 Soares NhHMPuS1 Homo sapiens CDNA clone 811883 3', (216...1); 99% identity. -(12600...1283) A1081371 ox76910.x1
Soares_NhHMPu_S1 Homo sapiens CDNA clone IMAGE:1662306 3', (224...1); 98% identity. -(12600...12656) AA760247 vv74e06.r1
Stratagene mouse skin (#937313) Mus musculus CDNA clone 1228162 5', (381...432), 76% identity."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note="DDS similarity to overlapping ESTs: (12144. .1298) AA456254 zx99d06.rl Soares NhHMPuS1 Homo sapiens cDNA clone 811883 5; (270. .523); 99% identity.~(12182. .12411) A1081371 ox76g10.xl Soares_NhHMPu_S1 Homo sapiens cDNA clone IMAGE:1662306 3'; (454. .225); 100% identity.~(12173. .1241) AA454642 zx99d06.sl Soares NhHMPuS1 Homo sapiens cDNA clone 811883 3'; (455. .217); 100% identity.~(12144. .12411) AA760247 vv74e06.rl Stratagene mouse skin (#937313) Mus musculus cDNA clone 1228162 5'; (119. .380); 69% identity."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /rpt_fam1ly="MER65A" complement(20427. . 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            complement(14029 .14445)
/note="predicted exon, program:
frame: 0, quality: good, score:
complement(17695 .18620)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  complement(12536...12614)
/note="predicted exon, program: grail2exons_human_1.3, frame: 2, quality: excellent, score: 90.000"
12600...18818
/rpt_family="Alusx"
complement(2707)
                                                    /rpt_family="MIR"
                                                                                                                                                                                                                                                                                  complement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              complement(19767
                                                                                                                                                                  rpt_family="MER45"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                'rpt_family="(CA)n"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         complement(19592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'rpt_family="L1P5"
'omplement''
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   rpt_family="MER11A"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      rpt_family="MER11B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            rpt_family="MLT1B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ____family="MER11A"
1. .19510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           _family="AluJo"
lement(107)
                                                                                                                                                                                                                                       _family="MSTB"
), 25%e'
                                                                                                                                                                                                                                                                                _family="AluJb"
lement(24910. .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                family-"Alusx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         family-"AluJo".
                                                                                                                                                                                                          11y-"HERVL"
                                                                                                                                        .26613)
                                                                                                                                                                                                                                                                                                                           .24429)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .19870)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    grail2exons_human_1.3,
58.000"
```

```
Ş
                                        뭐
                                                             Q
                                                                                        밁
                                                                                                             δÃ
                                                                                                                                       밁
                                                                                                                                                            Š
                                                                                                                                                                                     멂
                                                                                                                                                                                                          ğ
                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                          ş
                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                           δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-092-297-17 (1-117) x AC006262 (1-107573)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment Scores:
                                                                                                                                                                                                                                81583 CCAGTCATATCTGTGGCTGTCCACTCACCCCATCTTCCCTTTTCCCCACAGCTGTC 81642
                                        81823
                                                                                                                                       81703
                                                                                                                                                                                      81643
                                                                                                                                                                                                                                                                                    81523
                                                                                                                                                                                                                                                                                                                                                                                     81403
                                                                                         81763
                                                                                                                                                                                                                                                                                                                                     81463
                                                                                                                                                                                                                                                                                                                                                                                                                                    81343
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 81284 CCACTGCAACCACCCAGAGCCATGGCTCCCCGAGGCTGCATCGT-AGGTAAGGAGGACAG 81342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       No.:
                                                                                                                                                                                                                                                            16
                60
                                                               6
                                                                                                                                                               32
                                                                                                                                                                                                             18
                                                                                                                                                                                                                                                                                                             15
                                                                                                                                                                                                                                                                                                                                                             15
                                                                                                                                                                                                                                                                                                                                                                                                            15
                                                                                                                                                                                                                                                                                                                                                                                                                                                             15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 ProLeuGlnProProArgAlaMetAlaProArgGlyCysIleVal-----
 SCYSCYSTYrAspAspAlaValValProLeuAlaArgThrGlnThrCysGlyAsnCysTh 80
                                                 rLeuMetLeuCysGlnProH1sLysArgCysGlyAspLysPheTyrAspProLeuGlnHi 60
                                                                                                                                                                                TGCCACTACCTCCTGGATCTCACCAGCTCTGTCTCCTCCAGTGGCCCCCATGACTCCTTA 81822
                                                                                                                                   AGTGTTTGGGAAGCTGGAGGAGGGGTACACCTTCCAGGGGACCCCAGGCTGGGACCCACC 81762
                                                                                                                                                                                                        PheAlaIlePheCysIleSerArgLeuLeuCysSerHisGlyAla--------
                                                                                                                                                                                                                                                                                TGAGCTGCTCAAAGCCATACCGAGCCCTGGTTCCACCCAGTCTTCTTCTAAATGTCAGTG 81582
                                                                                                                                                                                                                                                                                                                                                                                                                                 GACCCCATTCCCACCTGAGCCCATCTCCAATCTCAGCCACCACCAGGGCTCTCTCCCTAC 81402
                                                                                                                                                                                                                                                                                                                                 ACAGCAATTCCCCATCCATAGTGCCCAGATCAGCCCCATCCACAGCCCTGTTTCAGTCCC 81522
                                                                                                                                                                                                                                                                                                                                                                                 CCCAAACTACACCTCATCCCTGTTCCCATGCCCAGCCAAATCTCCAGGCGTGAATTGCTC 81462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /rpt_family="AluSg"
complement(31707. .32005)
/rpt_family="AluSg"
complement(32050. .32614)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /rpt_family="MER4D"
29527. .29826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="predicted exon, program: grail2exons_human_1.3,
frame: 2, quality: good, score: 50.000"
29332. .29526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /rpt_family="LTR8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2.3e-44
531.50
44.31%
44.31%
79.57%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     _family="MLT2D"
9, .32601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        family="(GA)n"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 _tamil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        family="MER4D"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 family-"AluSg"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 y-"MER4D"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative:
                                                                                                           ----ProValAlaProMetThrProTy 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         113
0
1
142
2
                                                                                                                                                                                                                                                        -Alaval 17
                                    81882
                                                                                                                                                           32
                                                                                                                                                                                                          32
                                                                                                                                                                                                                                                                                                          15
                                                                                                                                                                                                                                                                                                                                                         15
                                                                                                                                                                                                                                                                                                                                                                                                          15
                                                                                                                                                                                                                                                                                                                                                                                                                                                          15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15
                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 4
AC007193/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                      repeat_region
                                                                      repeat_region
                                                                                                                     repeat_region
                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                    source
                                            repeat_region
                                                                                              repeat_region
                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sequence.
AC007193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AC007193.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  numan.
complement (2629.
          rpt_family="LINE2"
```

```
81883 CTGTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCCAGACGTGTGGAAACTGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 nAsnCysAspSerAlaArgThrSerAspAspArgLeuCysArg 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rPheArgValCysPheGluGlnCysCysProTrpThrPheMetValLysLeuIleAsnGl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Submitted (02-APR-1999) Joint Genome Institute, Lawrence Livermore National Laboratory, 7000 East Ave., Livermore, CA 94551, USA Map and sequence oriented from q centromere to telomere. BAC 82621 (CIT-B-139a18) overlaps BAC 264576 (CIT-B-297n14) to the left from bases 1 to 27,487 of this accession, and separated from BAC 89981 (CIT-B-158d10) on the right by a gap of approximately 17 to 23 kb. Additional chromosome 19 map and sequence information may be obtained at: http://www-bio.llnl.gov/bbrp/genome/genome.html.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Lamerdin, J.E., McCready, P.M., Skowronski, E., Viswanathan, V., Burkhart-Schultz, K.J., Gordon, L., Dias, J., Ramirez, M., Stilwagen, S., Phan, H., Velasco, N., Do, L., Regala, M., Terry, A., Garnes, J., Danganan, L., Erler, A., Christensen, M., Georgescu, A., Avila, J., Liu, S., Attix, C., Andreise, T., Trankheim, M., Awilo, K., Christensen, M., Bruce, R., Amico-Keller, G., Coefield, J., Duarte, S., Lucas, S., Bruce, R., Thomas B. Olian G. Trongiller, G., Coefield, J., Duarte, S., Lucas, S., Bruce, R., Thomas B. Olian G. Trankheim, M., Thomas B. Olian G. Trongiller, G., Coefield, J., Duarte, S., Lucas, S., Bruce, R., Thomas B. Olian G. Trongiller, G., Coefield, J., Duarte, S., Lucas, S., Bruce, R., Thomas B. Olian G. Trongiller, G., Coefield, J., Duarte, S., Lucas, S., Bruce, R., Olian, G., Coefield, J., Duarte, S., Lucas, S., Bruce, R., Olian, G., Coefield, J., Duarte, S., Lucas, S., Bruce, R., Olian, G., Coefield, J., Duarte, S., Lucas, S., Bruce, R., Olian, G., Christensen, M., Georgescu, A., Andreise, T., Trankheim, M., Georgescu, A., Andreise, M., Georgescu, A., Andreise, M., Andreise, M., Andreise
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 (bases 1 to 146180)
Lamerdin, J.E.
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Thomas,P., Quan,G., Kronmiller,B., Arellano,A., Sanders,C., (Nolan,M., Trong,S., Kobayashi,A., Olsen,A.S. and Carrano,A.V. Sequence analysis of a 1.9 Mb region in 19q13.2 between APOE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 146180)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AC007193 146180
Homo sapiens chromosome 19, E
                                                                                                                                                     complement(1857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /cell_type="fibroblast"
/note="LLNL clone name:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /map="19q13.2 between APOE/clone="BC82621"
rpt_family="L1MB4"
                                                                       'rpt_family="FLAM_A"
                                                                                                                                                                                                                                                                                                                                                   'rpt_family="L1"
|159. .1453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rpt_family="L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Research Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ocation/Qualifiers
                                                                                                                                                                                                   rpt_family-"L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        rpt_family-"L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cell_line="987SK"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "chromosome="19
                                                                                                                                                                                                                                                                                                    rpt_family="Alusx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .146180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA
82621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BC82621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and D19S412"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A linear P
(CIT-B-139a18),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BAC library obtained
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRI 17-JUN-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APOE and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        81942
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ow, D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               from
```

.2921)

```
misc_feature
                                          repeat_region
                                                                repeat_region
                                                                                      repeat_region
                                                                                                            repeat_region
                                                                                                                                   repeat_region
                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                             repeat_region
                                                                                                                                                         repeat_region
                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                               complement(13709. .14037)
/rpt_family="L1"
                                                                                                             complement(14115
                                                                                                                                   complement(14009
                                                                 complement(14859.
                                                                                                                                                                                                               complement(12806. 13106)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /rpt_family-"AluJo" 3355. .3655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           pt_family="AluSx"
nplement(8575. .8597)
pt_family="AT_rich"
nplement(8598. .8878)
                                                                                                                                                         _family="AluJb"
lement/13700
                                                                _family="L1MC/D"
ement(14050
                                                     _tamil
                                                                                                         family="LIMC/D" ement(14115)
                                                                                                                                                                                                                                                                                                                                                                         lement(11302..11517)
_family="LlMC/D"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  _family-"AluSq"
                     _family="AluJo"
.ement(16257, .
                                                                                      family="Alux"
ement(1//-
                                                                                                                                                                            family="(GAAA)n"
ement(1348)
                                                                                                                                                                                                                           family="L1MC/D"
ement(12p^r
                                                                                                                                                                                                                                                             _family="FRAM"
                                                                                                                                                                                                                                                                                                       lement(11833. .12138)
family="AluSg"
                                                                                                                                                                                                                                                                                                                                                                                                           _family="AluJb"
lement(10999. .:
                                                                                                                                                                                                                                                                                                                                                                                                                                                           _family="AluSq"
3. .10347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          _family="AluSx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        _family="(TA)n"
                                                                                                                                                                                                                                                                                                                                                                                       family-"AluJo"
ement(11200
                                                                                                                                                                                                                                                                                                                                                                                                                                                _tami
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    _family="AluJb"
                                                                                                                                                                                                                                                                                    famil
                                                                                                                                                                                                                                                                                                                   family="L1MC/D"
ement(11822
                                                                                                                                                                                                                                                                                                                                         family="FLAM_C" ement(11667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               _family="AluSx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               family-"Alu"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          lement(4005..4264).
_family="AluSx"
lement(4269..4568)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       >="predicted exon, program: grail2exons_human_1.3,
s: 2, quality: excellent, score: 81.000"
lement(5169. .5468)
_family="Alur"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     _family="Alux"
.5127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              family-"L1"
   "predicted exon, program: grail2exons_human_1.3,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   predicted exon, program:
0, quality: good, score:
                                          (ly="Alusx"
5492
                                                                                                                                                                                                                                                                       1y="LIMC/D"
2642
                                                                                                                                                                                                                                                                                                                                                                                                                                              Ly-"FLAM"
                   .16340)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       grail2exons_human_1.3
52.000"
  Percent Similarity:
Best Local Similarity:
Query Match:
                                              Alignment Scores: Pred. No.:
                                                                                           repeat_region
                                                                                                                repeat_region
                                                                                                                                       repeat_region
                                                                                                                                                              repeat_region
                                                                                                                                                                                                misc_feature
                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                             complement(30830. .31040)
/rpt_family="MIR"
                                                                                                                                     came: 2, quality: good, good, 29888)

complement(29585. 29888)

/rpt_family="AluSg"

10336. 30634
                                                                                                                                                                                                                                                                                        complement (28359.
                                                                                                                                                                                                                                        rpt_family="Alusc"
omplement(29777
                                                                                                                                                                                  note="predicted exon,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   complement(24403
7.62e-19
289.00
48.08%
45.51%
43.26%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rpt_family="HERVH"
omplement/1010
                                                                                                                                                                                                                                                                                                                                                      nplement(27125. .;
                                                                                                                                                                                                                                                                                                                                                                                                                             prement
                                                                                                                                                                                                          _family-"AluJo"
                                                                                                                                                                                                                     _family="AluJb"
4. .29081
                                                                                                                                                                                                                                                                                                                                                                                                     family="(TAA)n"
lement(260="
                                                                                                     _family="AluJb"
                                                                                                                                                                                                                                                                 _family="Alusg"
ement(28527)
                                                                                                                                                                                                                                                                                                                                                                                            _famil
                                                                                                                           family-"Alusq"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             _family="MER74"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          _family="HERVH"
ement(2267)
                                                                                                                                                                                                                                                                                                                          fami
                                                                                                                                                                                                                                                                                                                                                famil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     family="LTR7"
ement():
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 _famil
                                                                                                                                                                                                                                                                                                  family="AluJ/FLAM"
                                                                                                                                                                                                                                                                                                                                                                                                                                                              famil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               _tamily="AluSx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              famil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    _family=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           _family="THEIC"
                                                                                                                                                                                                                                                                                                                                                                                                                             family="Alusg/x"
ement(26224. .26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 family-"AluJb"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             famil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         family-"(GAAA)n"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               family-"AluJo"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           family-"Alusg"
                                                                                                                                                                                                                                                                                                                                                                                 1y="AluJo"
1876
                                                                                                                                                                                                                                                                                                                                        ly="AluSx"
173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        y="LTR7" .18817)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  quality: good, score: 63.000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        у="L1MD3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                             "Alusp"
                                                                                                                                                                                                                                                                                                                        -"AluSx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "HERVH"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "HERVH"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "AluSq"
                                 Length:
Matches:
           Mismatches:
  Indels:
                                                                                                                                                                       program:
                                                                                                                                                                        grail2exons_human_1.3,
71.000"
                                 146180
71
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                  SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 5
AX055440
  ð
                    US-09-092-297-17 (1-117) x AX055440 (1-662)
                                                          Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                     Alignment Scores:
                                                                                                                                            BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ΩY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                         FOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-092-297-17 (1-117) x AC007193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                           JOURNAL
                                                                                                                                                                                                                                                  TITLE
                                                                                                          .
0
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6087
                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                    5696 GGCCAGAAGTGCTCCTCAGCCCTGACCTCGGGTGACAGGCTTTCTCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5874 CAGCGGCATTTGGGAAGTGGGGACAAGCTCTACGACCCCTTGCGGCACTGTTGCTATGAC 5815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5934 TCTGACCTCACCAGCTCTGTCTCCCAGTGGCCCCATAAGTGCTTACCTCATGCTCTGC 5875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6054 CTCTGCATCCTCAGGCTCCTCTGCTCACACGGAGCCCCAGGTGAGCCCAGGAGGAACTGG 5995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .
4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    $
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21
    7
AlaMetAlaProArgGlyCysIleValAlaValPheAlaIlePheCysIleSerArgLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AspAlaValValProLeuAlaArgThrGlnThrCysGlyAsnCysThrPheArgValCys 84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PheGluGlnCysCysProTrp-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GlnProHisLysArgCysGlyAspLysPheTyrAspProLeuGlnHisCysCysTyrAsp 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCCCTTCCCTCTCCC---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AsnGlnAsnCysAspSerAlaArgThrSerAspAspArgLeuCysArg 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTCGAGCAGTGCTGCCCCGG-TCCCTCAGCTCCCAGGCGTCCCTCATGGTGAAGACGAAA 5697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGTGCTGTCGTGCCCTTGGGCAGGACCCAGAAGTGTGGAAACTGCACCTTCAGTGTCGC- 5756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ProLeuGlnProProArgAlaMetAlaProArgGlyCysIleValAlaValPheAlaIle
                                                                                                                                                                                                                                                           1 (bases 1 to 662)
Ashkenazi, A., Baker,K.P., Chan,B., Goddard,A., Godowski,P.J., Gurney,A.L., Hebert,C., Henzel,W., Kabakoff,R.C., Shelton,D.L., Tumas,D., Watanabe,C.K. and Wood,W.I.
                                                                                                                                                                                                                                                                                                                                                                               AX055440 662 bp
Sequence 70 from Patent WO0073452.
AX055440
                                                                                                                                                                                                                                                Compositions and methods for the treatment of immune related
                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                Genentech,
                                                                                                                                                                                                                        Patent: WO 0073452-A 70 07-DEC-2000;
                                                                                                                                                                                                                                       diseases
                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                    AX055440.1 GI:12228712
                                                                                                                                                                                                                                                                                                                                             human
                                                                                                                                                       þ
                                                                                                                                                    /organism="Homo sapiens"
/db_xref="taxon:9606"
187 c 167 g 15
                                                                                                                                                                                                 Location/Qualifiers
                                               6.74e-16
237.00
55.00%
40.83%
35.48%
                                                                                                                                                                                                                Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -----ValAlaProMetThrProTyrLeuMetLeuCys 44
                                                                                                                                                                                                                 (OS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (1-146180)
                                                         Length:
Matches:
Conservative:
Mismatches:
Indels:
                                             Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -----ThrPheMetValLysLeuIle
                                                                                                                                                      156
                                                                                                                                                                                                                                                                                                                                                                                                     DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     --ACAGCAGTCTTGGCCTCT 6055
                                              17
17
20
34
                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                     5649
                                                                                                                                                                                                                                                                                                                                                                                                       PAT
                                                                                                                                                                                                                                                                                                                                                                                                       13-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20
                                                                                                                                                                                                                                                                                                                    BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 6
AX055696
                                                                                                                                                                                                                                                                                 Pred.
             밁
                                 Š
                                                         밁
                                                                           Q
                                                                                                      밁
                                                                                                                           δõ
                                                                                                                                                     밁
                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q<sub>V</sub>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 맖
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20
                                                                                                                                                                                                                                   Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             멍
                                                                                                                                                                                                                                                                                            Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           rocus
                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                  .
No::
                                                                                                                                                                                                                                                                                                                                                                 source
             203
                                                         143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    203
                                   67
                                                                                47
                                                                                                        83
                                                                                                                                                     23
                                                                                                                             27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AX055696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                human
                                                                                                                                                                                                                                                                                                                               152
```

```
Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                              US-09-092-297-17 (1-117) x AX055696
                                                                                                                                                                                                                                                                                                 7 AlaMetAlaProArgGlyCysIleValAlaValPheAlaIlePheCysIleSerArgLeu
ATCTTATCCTTAAAGGAGACCCGCCGCCGCTGTGGCTCCACCTTGCACCTTCTGGCCCTGCTTT
                                        ValValProLeuAlaArgThrGlnThrCysGlyAsn---CysThrPheArgValCysPhe 85
                                                                                                                                                                                                       LeuCysSerHisGlyAlaProValAlaProMetThrProTyrLeuMetLeuCysGlnPro
                                                                                                                                                                        CAGTGTTCAAAAAGGAACTACAGACGCTCCTGTTGGCTCAGGACTGTGGCTGTGCCAGCCG
                                                                                                                                                                                                                                                         AGCATGAGGCCACGATGCTGCATCTTGGCTCTTGTCTGCTGGATAACAGTCTTCCTCCTC
                                                                                     ACACCCAGGTGTGGGAACAAGATCTACAACCCTTCAGAGCAGTGCTGTTATGATGATGCC
                                                                                                           H1sLysArgCysGlyAspLysPheTyrAspProLeuGlnH1sCysCysTyrAspAspAla 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTGGGTATGAAGTCTCAGTGTCACTTATCTCCCATCTCCCGGAGCTGTACCAGGAACAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GluGlnCysCysProTrpThr---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ValValProLeuAlaArgThrGlnThrCysGlyAsn---CysThrPheArgValCysPhe :::::: ||||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HisLysArgCysGlyAspLysPheTyrAspProLeuGlnHisCysCysTyrAspAspAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LeuCysSerHisGlyAlaProValAlaProMetThrProTyrLeuMetLeuCysGlnPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ### AGCATGAGGCCACGATGCTGCATCCTTGGCTCTGCTGGATAACAGTCTTCCTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGCTCTGCCCGAGTCTTTTGGCCCCCCAGCAGAAGTTTCTTGTGAAGTTGAGGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATCTTATCCTTAAAGGAGACCCGCCGCTGTGGCCTCCACCTTCTGGCCCTGCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACACCCAGGTGTGGGAACAAGATCTACAACCCTTCAGAGCAGTGCTGTTATGATGATGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGTGTTCAAAAGGAACTACAGACGCTCCTGTTGGCTCAGGACTGTGGCTGTGCCAGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 662)

Baker, K.P., Goddard, A., Gurney, A.L., Hebert, C., Henzel, W., Kabakoff, R.C., Shelton, D.L., Smith, V., Watanabe, C.K. and Wood, W.I. Methods and compositions for inhibiting neoplastic cell growth Patent: WO 007348-A 11 07-DEC-2000; Genentech, Inc. (US)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 11 from AX055696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AX055696.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Homo sapiens"
/db_xref="taxon:9606"
187 c 167 g 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                         6.74e-16
237.00
55.00%
40.83%
35.48%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GI:12228831
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Patent
                                                                                                                                                                                                                                                                                                                                              (1-662)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO0073348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -----IleAsnGlnAsnCysAspSerAlaArg
                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -----PheMetValLysLeu-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        156 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA
                                                                                                                                                                                                                                                                                                                                                                                           49
17
34
30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PAT 13-JAN-2001
                                                                                                                                                                                                                46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   106
  262
                                                                                     202
                                                                                                                                                                        142
                                                                                                                                                                                                                                                         82
                                                                                                                                                                                                                                                                                                    26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      202
```

```
US-09-092-297-17 (1-117) x AX118905 (1-378)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AX118905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Snoor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EYWORDS .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Match:
                                                301
                                                                                                                                                                                                                                                       181 TTATCCTTAAAGGAGACCCGCCGCTGTGGCTCCACCTGCACCTTCTGGCCCCTGCTTTGAG 240
                                                                                                                                                                                                                                                                                                                                                                  121 CCCAGGTGTGGGAACAAGATCTACAACCCTTCAGAGCAGTGCTGTTATGATGATGCCATC 180
                                                                                                                                                                                                         87 GlnCysCysProTrpThr-
                                                                                                                                                                                                                                                                                                                                                                                                       48 LysArgCysGlyAspLysPheTyrAspProLeuGlnHisCysCysTyrAspAspAlaVal 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             86
                                        GGTATGAAGTCTCAGTGTCACTTATCTCCCCATCTCCCGGAGCTGTACCAGGAACAGG
                                                                                                                                             CTCTGCTGTCCCGAGTCTTTTGGCCCCCAGCAGAAGTTTCTTGTGAAGTTGAGGGTTCTG 300
                                                                                                                                                                                                                                                                                                           ValProLeuAlaArgThrGlnThrCysGlyAsn---CysThrPheArgValCysPheGlu 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGTTCAAAAGGAACTACAGACGCTCCTGTTGGCTCAGGACTGTGGCTGTGCCAGCCGACA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CysSerHisGlyAlaPròValAlaProMetThrProTyrLeuMetLeuCysGlnProHis 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATGAGGCCACGATGCTGCATCTTGGCTCTTGTCTGGGATAACAGTCTTCCTCCTCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MetAlaProArgGlyCysIleValAlaValPheAlaIlePheCysIleSerArgLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGGGTATGAAGTCTCAGTGTCACTTATCTCCCATCTCCCGGAGCTGTACCAGGAACAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAGCTCTGCTGTCCCGAGTCTTTTGGCCCCCAGCAGAAGTTTCTTGTGAAGTTGAGGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GluGlnCysCysProTrpThr----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AX118905
Sequence
AX118905
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalla; Eutheria; Primates; Catarrhini; Hominidae; 1 (bases 1 to 378)
Conklin,D.C. and Yee,D.P.
Proteins and polynucleotides encoding them Patent: WO 0129221-A 69 26-APR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AX118905.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ZymoGenetics, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /protein_id="CAC38526.1"
/db_xref="GI:14035860"
/tals1aton="MRPROCILALVCWITVFLLQCSKGTTDAPVGSGLWLCQPTPRCG
NKIYNPSEQCCYDDAILSLKETTRCGSTCTFWPCFELCCPESFGPQQKFLVKLRVLGW
KSQCHLSPISRSCTRWRHVLYP"

KSQCHLSPISRSCTRWRHVLYP"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'codon_start=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  'note="unnamed protein product"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4.73e-16
236.00
54.62%
41.18%
35.33%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GI:14035859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               108 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         378 bp
Patent WO0129221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (US)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches:
Indels:
                                                                                      -IleAsnGlnAsnCysAspSerAlaArg 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ---IleAsnGlnAsnCysAspSerAlaArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -----PheMetValLysLeu-----
                                                                                                                                                                                                 -PheMetValLysLeu-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 378
49
16
34
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PAT 11-MAY-2001
                                     357
                                                                                                                                                                                                      97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 8
AC007785/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Locus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                        CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted (11-JUN-1999) Joint Genome Institute, Lawrence Livermore National Laboratory, 7000 East Ave., Livermore, CA 94551, USA Map and sequence oriented from q centromere to telomere. BAC 282485 overlaps cosmid R30477 to the left from bases 1 to 4,419 of this accession, and overlaps BAC 264576 (CIT-B-297N14; AC006262) from bases 146,203 to 166,500. Additional chromosome 19 map and sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Burkhart-Schultz,K., Gordon,L., Scott,D., Johnson,G., Stilwagen, Phan,H., Velasco,N., Do,L., Regala,W., Terry,A., Danganan,L., Erler,A., Christensen,M., Georgescu,A., Avila,J., Attix,C., Andreise,T., Amico-Keller,G., Coefield,J., Duarte,S., Lucas,S., Bruce,R., Thomas,P., Quan,G., Kronmiller,B., Arellano,A., Cander, C., Nolan W., Thomas, P., Quan,G., Kronmiller,B., Arellano,A., Cander, C., Nolan W., Cander, C., Charlashi a. Olson A. Cander, C., Charlashi a. Olson A. Cander, C., Cand
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence analysis of a 2.5 Mb region in 19q13.2-13.3 and C5R1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; E
Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         information may be obtained at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sanders,C., Ow,D., Nolan,M., Trong,S., Kobayashi,A., Carrano,A.V.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mammalia; Eutheria; Pr
1 (bases 1 to 166500)
Lamerdin, J.E., McCread
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens chromosome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Jnpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AC007785.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AC007785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    amerdin, J.E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              numan.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 166500)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note-"Hypothetical arginine-rich gene product;
Hypothetical CDS constructed from overlapping ESTs and
Xyrail predictions. EST coverage is lacking for some
portions of the CDS. Gene may be alternatively spliced, a
multiple transcripts map into this region; alternatively
these individual cones may represent artifactual events
during RT and cDNA creation"
                                                                                                                                                                                                                                                                                                                                                                        /note="DDS similarity to overlapping ESTs:
N39722 yx92e04.rl Homo saplens cDNA clone 269214 5';
(12. .170); 998 identity.-AA289147 zt1407.rl NCI_CGAP_GCB1
Homo saplens cDNA clone IMAGE:713101 5'; (6. .163); 998
identity.-AA143160 z149407.rl Soares pregnant uterus NbHPU
Homo saplens cDNA clone 505261 5'; (1. .43); 1008
identity.-AA142881 z149407.sl Soares pregnant uterus NbHPU
Homo saplens cDNA clone 505261 3'; (570. .527); 648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /rpt_family="AluJb"
complement(472..712)
/rpt_family="MIR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      complement(177
'evidence≖not_experimental
                                                                                                                                                                                                                                                                                                                             )oin(<746.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /rpt_family="{TGAA}n"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /map="19q13.3 between DM and c5R1"
/clone="CIT-B-344H19"
/clone_lib="Cal Tech CIT-B BAC lib
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             note-"LLNL clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GI:5042403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           McCready, P.M., Richardson, P.,
                                                                                                                                                                                                                                                                   6. .904,1157. .1239,4294. .4451,5875. .6036,
12994,13080. .13162,13903. .13958,14053. .14128,
14568,14726. .14804,14982. .15039,15813. .15885,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     166500
me 19, I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             name:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA
282485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "-B BAC library"
BC282485"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear PRI
(CIT-B-344H19),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sakaldasis, G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             map and sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRI 11-JUN-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        between APOE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Olsen, A.S. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                complete
```

В Ş Qy 밁 δ В γQ 밁 Ş В

밁

δÃ

```
repeat_region
                                                                                                                         repeat_region
                                                                                                                                                                                                                                                            misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /rpt_family="Alusx"
5875. .5800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note-*DDS similarity to overlapping ESTs:
//1016-*DDS similarity to overlapping ESTs:
//1016-*DDS similarity to overlapping ESTs:
//1016-*INCI_CGAP_GCB1 Homo sapiens cDNA clone 269214 5';
//1016-*INCI_CGAP_GCB1 Homo sapiens cDNA
//1016-*INCI_CGAP_GCB1 Homo sapiens cDNA
//1016-*INCI_CGAP_GCB1 Homo sapiens cDNA
//1016-*INCI_CGAP_GCB1 To:
//1016
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note-"predicted exon, program: grail
frame: 1, quality: excellent, score:
complement(6148. 6443)
/rpt_family-"AluSx"
                                                                                                                                                                                                                                                                                   /note-"DDS similarity to overlapping ESTs:
N39722 yx52e04 rl Homo sapiens cDNA clone 269214 5';
(439. .506); 71% identity -AA143160 2149d07.rl Soares
pregnant uterus NbHPU Homo sapiens cDNA clone 505261 5';
(282. .379); 100% identity -AA142881 z149d07.sl Soares
pregnant uterus NbHPU Homo sapiens cDNA clone 505261 3';
(204. .175); 95% identity."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /rpt_family="Alusg/x" complement(2747. .3044)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N39722 yx92e04.rl Homo sapiens cDNA clone 269214 5';
(171. .255); 95% identity -AA283147 zt14007.rl
NCI_CGAP_GCB1 Homo sapiens cDNA
clone IMAGE:713101 5'; (164. .247); 92% identity.-AA143160
z149007.rl Soares pregnant uterus NbHPU Homo sapiens cDNA
clone 505261 5'; (44. .126); 100% identity.-N88707
yx66d11.rl Homo sapiens cDNA clone 266709 5'; (1. .66); 98%
identity.-AA142881 z149d07.sl Soares pregnant uterus NbHPU
Homo sapiens cDNA clone 505261 3'; (526. .438); 82%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      complement(2200. .2498)
/rpt_family="Alusx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MGGRPGSLAPRSAQLNSKRYLILIYSVEFDRIHYPLPLPYQGKPDPVVLQGIIRSLKE
ELGRLJQLDGQNTROTRENELWHLREQVSRLASEKRELEAQLGSREEALAGRAARQE
AEALRGLYRGLELELRQERGIGHRYAGRRGQDCRRLAKELEALKSERSLEIAKAKTLT
SELALYKRGGRGSRGREPARPSPSPTGGRALREDPTAFVKAKERKQREIQMKQQQRN
RLGSGGSGDGPSYSWSRQTQPPAALTGRGDAPNRSRNRSSSVDSFRSRCSSASSCSDL
RLGSGGSGDGPSYSWSRQTQPPAALTGRGDAPNRSRNRSSSVDSFRSRCSSASSCSDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           identity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 complement(2576. .. 2746)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           complement (1673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /product="BC282485_1"
/protein_1d="AAD38244.1"
/protein_1d="AAD38244.1"
/db_xref="G1:5042405"
/translation="TLAMDQPAGLQVDYVFRGVEHAVRVMVSGQVLELEVEDRMTADQ
/translation="TLAMDQPAGLQVDYVFRGVEHAVRVMVSGQVLELEVEDRMTADQ
/KCANSLATION="TLAMDQPAGLQVDYVFRGVEHAVRVMVSGQVLELEVEDRMTADQ
/KCANSLATION="TLAMDQPAGLQVDYVFRGVEHAVRVMVSGSVTLDLLTYTDLESLRNRK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /rpt_family="LINE2"
complement/onc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /rpt_family="(CA)n"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                overlapping ESTs:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note="predicted exon, program: grail2exons_human_1.3, frame: 0, quality: good, score: 62.000~DDS similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HQAADMAEIDARLKALQEYMNRLDMRS"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    __family="Alusx"
lement(2040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     _family-"MER64"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      _family-"MER64"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              _tamily="AluSx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .4060
                                                                                                                                                              grail2exons_human_1.3,
core: 100.000"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6
                                                            δõ
                                                                                                                                                                                                                                    δ
                                                                                                                                  Db 121894 CCAGACGCTCCTGTTGGCTCAGGACTGTGGCTGTGCCAGCCGACACCCCAGGTGTGGGAAC 121835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score:
53 LysPheTyrAspProLeuGlnHisCysCysTyrAspAspAlaValValProLeuAlaArg
                                                                                                                                                                                                                  33 ProValAlaProMetThrProTyrLeuMetLeuCysGlnProHisLysArgCysGlyAsp 52
```

```
US-09-092-297-17 (1-117) x AC007785 (1-166500)
                                                                                                                                                                      Query Match:
                                                                                                                                                                                                               Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                           No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             complement(13799. .13954)
/rpt_family="GC_rich"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note-"predicted exon, program: grail2exons_human_1.3, frame: 2, quality: excellent, score: 100.000-DDS similarity to AA765166 nz79c05.s1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1301672; (122. .48); 100%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            complement(12334. .12384)
/rpt_family="LINE2"
12784. .12994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /rpt_family="Alusx"
9909. .9944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /rpt_family="GC_rich" 13080. .13162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Laoy3. 12979.
/note="DDS similarity to AA765166 nz79c05.s1 NCI_CGAP_GCB1
/note="DDS control of the control of t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              complement(12055...12088)
/rpt_family="AT_rich"
complement(12186...12327)
/rpt_family="LIM1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /rpt_family="Alus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /rpt_family="AT_rich"
complement(11864. .11885)
/rpt_family="AT_rich"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /rpt_family="AluJ"
| 1322. 11610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                complement(10753.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /rpt_family="Alusx"
complement(10587...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /rpt_family="LINE2"
complement(7118. .7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           identity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /rpt_family="AluSg"
l1775. .11814
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /rpt_family="AluSx"
yomplement/11077
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /rpt_family="AluJ"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /rpt_family="MIR"
complement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/oncomplement/on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /rpt_family="(CA)n"
complement/7700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /rpt_family="MIR"
complement/75^^
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     note predicted exon, program: grail2exons_human_1.3, rame: 1, quality: excellent, score: 92.000"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rpt_family="MER5B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rpt_family="MER5B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rpt_family-"AluJo"
                                                                                                                  3.3e-09
197.50
65.28%
51.39%
29.57%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       _family="GC_rich"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .13032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12994
                                                                                                                                                 Matches:
Conservative:
Mismatches:
Indels:
                                                                                                  166500
37
10
18
7
```

```
JOURNAL
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 9
AC007785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Db 121774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Db 121714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121834 AAGATCTACAACCCTTCAGAGCAGTGCTGTTATGATGATGCCATCTTATCCTTAAAGGAG 121775
                                                                                            CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCTTTTGGCCCCCAGCAGAAGTTTCTTGTGAAGTTG 121679
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCCGCCGCTGTGGCTCCACCTGCACCTTCTGGCCCTGCTTTGAGCTCTGCTGCTCCCGAG 121715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ThrGlnThrCysGlyAsn---CysThrPheArgValCysPheGluGlnCysCysProTrp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Submitted (11-JUN-1999) Joint Genome Institute, Lawrence Livermore National Laboratory, 7000 East Ave., Livermore, CA 94551, USA Map and sequence oriented from q centromere to telomere. BAC 282485 overlaps cosmid R30477 to the left from bases 1 to 4,419 of this accession, and overlaps BAC 264576 (CIT-B-297N14; AC006262) from bases 146,203 to 166,500. Additional chromosome 19 map and sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 166500)

Lamerdii, J.E., McCready, P.M., Richardson, P., Sakaldasis, G., Burkhart-Schultz, K., Gordon, L., Scott, D., Johnson, G., Stilwagen, S., Phan, H., Velasco, N., Do, L., Regala, W., Terry, A., Danganan, L., Erler, A., Christensen, M., Georgesou, A., Avila, J., Attx, C., Andreise, T., Amico-Keller, G., Coeffeld, J., Duarte, S., Lucas, S., Bruce, R., Thomas, P., Quan, G., Kronmiller, B., Arellano, A., Candere O., D., Wolfe, M., Candere, R., Thomas, P., Quan, G., Kronmiller, B., Arellano, A., Candere O., D., Wolfe, M., Candere, C., Christensen, M., Candere, R., Thomas, P., Quan, G., Kronmiller, B., Arellano, A., Candere O., D., Wolfe, M., Candere, C., Chiller, B., Arellano, A., Candere O., D., Wolfe, M., Candere, C., Chiller, B., Arellano, A., Candere O., D., Wolfe, M., Candere, C., Can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sequence. AC007785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      http://www-bio.llnl.gov/bbrp/genome/genome.html.
Location/qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sanders, C., Ow, D., Nolan, M., Trong, S., Kobayashi, A., Olsen, A.S. and Carrano, A.V.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and C5R1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence analysis of a 2.5 Mb region in 19q13.2-13.3 between APOE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    information may be obtained at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AC007785 166500 bp DNA linear PRI 11-JUN-Homo sapiens chromosome 19, BAC 282485 (CIT-B-344H19), complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AC007785.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (bases 1 to 166500)
                                                                                                                             /rpt_family="AluJb"
complement(472. .712)
/rpt_family="AluJb"
                                                                                                                                                                                                                                                                                                                                                                                                                                            /rpt_family="MIR"
746. 904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /rpt_family="(TGAA)n"
complement(177. .453)
join(<746. .904,1157. .1239,4294. .4451,5875. .6036,
12784. .12994,13080. .13162,13903. .13958,14053. .14128,
14429. .14568,14726. .14804,14982. .15039,15813. .15885
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /map="19q13.3 between DM and c5R1"
/clone="CIT-B-344H19"
/clone_lib="Cal Tech CIT-B BAC library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /chromosome="19"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'note="LLNL clone name:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .166500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GI:5042403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -----PheMetValLysLeu 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRI 11-JUN-1999
                                                                                                       misc_feature
                                                                                                                                                                                                           misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             misc_feature
```

```
/note="DDS similarity to overlapping ESTs:
//1016="DDS similarity to overlapping ESTs:
//1016="DDS similarity to overlapping ESTs:
//1016="DDS similarity"
//1016="DDS similar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /rpt_family="AluSg/x"
complement(2747. .301/\
/rpt_family="AluSg/x"
/note="DDS similarity to N28707 yx66dl1:r1 Homo sapiens cDNA clone 266709 5'; (223. .246); 100% identity."
                                                                                                             /rpt_family="Alusx" 5875. .5898
                                                                                                                                                                                                      complement(4789.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:713101 5'; (164. .247); 92% identity.-AA143160 clone IMAGE:713101 5'; (164. .247); 92% identity.-AA143160 clone 505261 5'; (44. .126); 100% identity.-N28707 yx66d11:r1 Homo sapiens cDNA clone 266709 5'; (1. .66); 98% identity.-AA142881 z149d07.s1 Soares pregnant uterus NbHPU Homo sapiens cDNA clone 505261 3'; (526. .438); 82%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      overlapping ESTs:
N39722 yx92e04 rl Homo sapiens cDNA clone 269214 5';
(171. .255); 95% identity ~AAA83147 zt14d07.rl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SELALYKRGGRGSRGRGRPARPSPSPTGGRALRFDPTAFVKAKERKQREIOMKOOORN
RLGSGGSGDGPSVSWSRQTQPPAALTGRGDAPNRSRNRSSSVDSFRSRCSSASSCSDL
EDFSESLSRGGHRRRGKPPSPTPWSGSNMKSPPVERSHHQKSLANSGGWVPIKEYSSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /translation="TLAMDQPAGLQVDYVFRGVEHAVRVMYSGQVLELEVEDRMTADQWRGEEPAGFIEDLTHKTGNEKQFNIFCHMLESALTQSSESVILDLTTYTDLESLRNRKMGFRGFOSLAFRSAQLMSKRYLILIYSVEFDRIHYPLPLFYGGKPDPVVLQGIIRSLKEELGRLOGLDGUTRDTRENEIMHLREQVSRLASEKRELEAQLGRSREENLAGRAARQEAARQEAARQLVRGLYRGLELELQQERGLGHRVAGRRGQDCRRLAKELEBAKASERSLRARLKTLT
                                                                                                                                                                                                                                                             ldentity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /zpt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /rpt_family="Alusx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note-"Hypothetical arginine-rich gene product;
/note-"Hypothetical CDS constructed from overlapping ESTs and
Xgrail predictions. EST coverage is lacking for some
portions of the CDS. Gene may be alternatively spliced, as
multiple transcripts map into this region; alternatively,
these individual clones may represent artifactual events
during RT and CDNA creation"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          rpt_family="MER64"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /rpt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /rpt_family-"(CA)n"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                frame: 0, quality:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HQAADMAEIDARLKALQEYMNRLDMRS"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          identity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="predicted exon,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /evidence=not_experimental
/product="BC282485_1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /protein_id="AAD38244.1"
/db_xref="GI:5042405"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /product="BC282485
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    codon_start=3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        _family="Alusx"
|ement/2576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       _family="LINE2"
lement(3000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .16122)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                y-"MER64"
                                                                                                                                                                                                      .5083)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     good,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     program:
)d, score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           grail2exons_human_1.3
62.000-DDS similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ç
```

/note="DDS similarity to overlapping ESTs:
N39722 yx92e04.rl Homo sapiens cDNA clone 269214 5';
(439. .506); 71% identity.-AA143160 z149d07.rl Soares

```
Query Match:
                      Percent Similarity:
Best Local Similarity:
                                                                          Pred. No.:
                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                        misc_feature
                                                                                                                                                                                                                                                                                                                                                               misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                      misc_feature
                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc_feature
                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /rpt_family="AluSx"
complement(11065. .11191)
/rpt_family="AluJ"
11322. .11619
/rpt_fam:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /rt_family="AT_rich"
complement(11914. .11976)
/rt_family="A1"
complement/1707"
complement/7707"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /rpt_family="MIR"
complement(8789, .9083)
/rpt_family=""
                                                                                                                                                                                                                                                                                                                                                                                                  frame: 1, 12847. .1
                                                                                                                            complement(13799. .13954)
/rpt_family="GC_rich"
                                                                                                                                                                            /note="predicted exon, program: grail2exons_human_1.3, frame: 2, quality: excellent, score: 100.000-DDS similarity to AA765166 nz79c05.51 NCI_CGAP_GCB1 Homo saplens cDNA clone IMAGE:1301672; (122. .48); 100%
                                                                                                                                                                                                                                                                                                           12895. .1.2994
/note="DDS similarity to AA765166 nz79c05.s1 NCI_CGAP_GCB1
Homo sapiens cDNA clone IMAGE:1301672; (222. .123); 97%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    complement(12055..12088)
/rpt_family="AT_rich"
complement(12186..12327)
/rpt_family="LIMI"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /rpt_family="AT_rich"
complement(11864. .11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /rpt_family="Alusx"
complement(10587. .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /rpt_family="Alusx"
9909, .9944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /rpt_family="MER5B" complement(9539. .9)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 complement(7118. .7340)
/rpt_family="MIR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /rpt_family="AluJ"
complement/icarr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /rpt_family="(CA
complement(7792.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            rpt_family="(CA)n"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note="predicted exon, program: grail2exons_human_1.3,
frame: 1, quality: excellent, score: 100.000"
complement(6148 ..6443)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            pregnant uterus NbHPU Homo sapiens cDNA clone 505261 5'; (282. .379); 100% identity.-AA142881 z149607.s1 Soares pregnant uterus NbHPU Homo sapiens cDNA clone 505261 3'; (274. .175); 95% identity."
                                                                                                                                                                 dentity.
                                                                                                                                                                                                                                                                                                                                                                                                       /note="predicted exon, program: grail2exons_human_1.3
frame: 1, quality: excellent, score: 92.000"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       complement(6608.
                                                                                                                                                                                                                                    'note="predicted exon,
                                                                                                                                                                                                                                                                     rpt_family="GC_rich"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /rpt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /rpt_family="/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5906. .6036
7.67e-09
194.00
55.10%
43.88%
29.04%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       _family="LINE2"
                                                                                                                                                                                                                                                                                                                                                                               family="GC_rich"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ement(12334. .12384)
family="LINE2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   family-"AluSg"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   _family="MER5B"
                                                                                                                                                                                                                                                                                            13032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AluSx"
                                                     Length:
Matches:
                    Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .9841)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .6648)
 166500
43
11
26
18
```

```
ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Db 158329 TGTCTGTCC-----ATCTGTCCA------GCTCCCGCTGGCTCAGAACCA 158367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Db 158428 TGTTACAATGACGCCATCGTGTCCCTGAGCGAGACCCGCCAATGTGGTCCCCCCTGCACC 158487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-092-297-17 (1-117) x AC007785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Db 158548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AC094931/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             158368 TGGCTGTGCCAGCCGGCACCCAGGTGTGGAGACAAGATCTACAACCCCTTGGAGCAGTGC 158427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          158488
Albirooks, S.L., Amarztunge, H.C., Are, J.R., Banks, T., Bunks, T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   95 ValLysLeu-------IleAsnGlnAsnCysAspSerAlaArgThrSer 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    62 CysTyrAspAspAspAlaValValProLeuAlaArgThrGlnThrCysGly---AsnCysThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   42 MetLeuCysGlnProHisLysArgCysGlyAspLysPheTyrAspProLeuGlnHisCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22 CysIleSerArgLeuLeuCysSerHisGlyAlaProValAlaProMetThrProTyrLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTGAAGCTGAAGGTTCAGGGTGTGAATTCCCAGTGCCACTCATCTCCCATCTCC 158601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PheargValCysPheGluGlnCysCys-------ProTrpThrPheMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTCTGGCCCTGCTTTGAGCTCTGCTGTCTTGATTCCTTTGGCCTCACAAACGATTTTGTT 158547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rattus norvegicus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AC094931 47407 bp 1
Rattus norvegicus clone CH230-6D18,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Norway rat.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HTG; HTGS_PHASE1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AC094931.2 GI:17941731
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               28 unordered pieces.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (bases 1 to 47407)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (1-166500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA linear
, *** SEQUENCING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IN PROGRESS. ***,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         08
```

TITLE
JOURNAL
REFERENCE
AUTHORS
TITLE

Unpublished

JOURNAL

COMMENT

findPhrapList

```
Submitted (15-SEP-2001) Human Genome Sequencing Center, Department of Molecular and Human Genetics, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030, USA On Dec 20, 2001 this sequence version replaced gi:15624768.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Wall,R., Wang,S., Ward-Moore,S., Warrew,...
Walliams,G., Williamson,A.,
White, Zhou,J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Worley, K., Wu, C., Wu, Y., Wu, Y.F., Weinstock, G. and Gibbs, R. Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                    arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (see http://www.hgsc.bcm.tmc.edu/docs/Genbank_draft_data.html).
NOTE: This is a 'working draft' sequence. It currently
consists of 28 contigs. The true order of the pieces
is not known and their order in this sequence record is
                                                                                                                                                                                                                                                                                                                                                                                                                                as soon as it is available and the accession number will be preserved.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NOTE: Estimated insert size may differ from sequence length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Consensus quality: 22954 bases at least Q40 Consensus quality: 29327 bases at least Q30 Consensus quality: 35153 bases at least Q20 Estimated insert size: 22926; sum-of-contigs estimation Quality coverage: 0x in Q20 bases; agarose-fp estimation Quality coverage: 0.2x in Q20 bases; sum-of-contigs estimation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 47407)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Assembly program: Phrap; version 0.990329First call to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Web site: http://www.hgsc.bcm.tmc.edu/Contact: hgsc-help@bcm.tmc.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Center: Baylor College of Medicine Center code: BCM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Center clone name: CH230-6D18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Center project name: GBTH
                                                                                                                                                                                                                                                                                                                                                                                                                     1945:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Project Information
                                                    gap of contig
                                                                            gap of
                                                                                                                                           gap of
                                                                                                                                                         gap of contig
                                                                                                                                                                                                                                     gap o
                                                                                                                                                                                                                                                                                                gap of
                                                                                                                                                                                                                                                                                                                                                                              contig
gap of
                                        gap of
                                                                                                                   gap o
                                                                                                                                conti
                                                                                                                                                                                   conti
                                                                                                                                                                                              gap o
                                                                                                                                                                                                                        gap o
                                                                                                                                                                                                                                                             conti
                                                                                                                                                                                                                                                                         gap o:
                                                                                                                                                                                                                                                                                    contig
                                                                                                                                                                                                                                                                                                                           gap o
                                                                                                                                                                                                                                                                                                                                                    gap of
                                                                                                                                                                                                             conti
                                                                                                                                                                                                                                                                                                                                        contig
                                                                                                                                                                                                                                                                                                                                                                  contig
                                                                                                                                                                                                                                                                                                                                                                                                                  contig
                                                                                                                                                                                                                                                                                                                                                                                                       gap of
                                                    unknown
of 1997
                                                                            unknown
of 1025
                                                                                                      of 2153
                                                                                                                                                         of 1824
                                                                                                                                                                                                                                                                                                                                                               of 1999
                                                                                                                                                                                                                                                                                                                                                                                         of 2253
                                                                                                                                            unknown
                                                                                                                                                                                                            ŏ,
                                                                                                                                                                                                                                    of.
                                                                                                                                                                                  of 2001
                                                                                                                                                                                              unknown
                                                                                                                                                                                                                                                             of 1215
                                                                                                                                                                                                                                                                         unknown
                                                                                                                                                                                                                                                                                     of 2038
                                                                                                                                                                                                                                                                                                               of 2554
                                                                                                                                                                                                                                                                                                                                        of 2312
                                                                                                                                                                                                                        unknown
                                                                                                                                                                                                                                                                                                unknown
                                                                                                                                                                                                                                                                                                                                                    unknown
                                                                                                                                                                                                                                                                                                                                                                                                                    of 1945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Warren, R.,
                                                                                                                                                                                                                                                                                                                                                                                                                bp in length
                                                                                                                                                                                   bp in
                                                                                                                                                                                                                                                                                                                                                                                       bp in length
                                     length
                                                               length
                                                                                                                                                                                                                                                length
                                                                                        ength
                                                                                                                   ength
                                                                                                                                          ength
                                                                                                                                                                                              ength
                                                                                                                                                                                                                        ength
                                                                                                                                                                     ength
                                                                                                                                                                                                                                                                         ength
                                                                                                                                                                                                                                                                                                ength
                                                                                                                                                                                                                                                                                                                          ength
                                                                                                                                                                                                                                                                                                                                                   ength
                                                                                                                                                                                                                                                                                                                                                                              ength
                                                                                                                                                                                                                                                                                                                                                                                                      .ength
                                                                                                                                                                                                                                                                                                                                      in length
                                                 length
                                                                         length
                          length
                                                                                                    length
                                                                                                                              length
                                                                                                                                                       length
                                                                                                                                                                               length
                                                                                                                                                                                                        length
                                                                                                                                                                                                                                 length
                                                                                                                                                                                                                                                           length
                                                                                                                                                                                                                                                                                   length
                                                                                                                                                                                                                                                                                                            length
                                                                                                                                                                                                                                                                                                                                                               length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Washington,C.,
Wleczyk,R., Wooden,S.,
Zorrilla,S., Nelson,D.,
                     ACCESSION
VERSION
                                                                        AC094152/c
LOCUS
                                                                                                                            밁
                                                                                                                                                   QΥ
                                                                                                                                                                                                     δÃ
                                                                                                                                                                              밁
                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                       δã
                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                            DEFINITION
                                                                                                   RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                             δã
                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-092-297-17 (1-117) x AC094931 (1-47407)
            KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment
                                                                                                                           35462
                                                                                                                                                                                                                         35582 TGTCACACACCTTACCTGCACCTCCTGTTGTCACACACCCTTACCTGCACCTTACCTGCAC 35523
                                                                                                                                                                              35522
                                                                                                                                                                                                                                                                                 35621
                                                                                                                                                                                                                                                                                                                                                                               35741 CCCCTTACTGCCCCTCCCGTTGTTCCCCCCCCTTACTGCCCCCTTTTGTTGTCACGCCCCT 35682
                                                                                                                                                                                                                                                                                                                                   35681
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Мо.
::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                  93 PheMetValLysLeuIleAsnGln 100
                                                                                                                                                                                                      73
                                                                                                                                                                                                                                                        54
                                                                                                                                                                                                                                                                                                          34
                                                                                                                                                                                                                                                                                                                                                             21
                                                                                                                                                                                                                                                                                                                                                                                                       1 ProLeuGlnProProArgAlaMetAlaProArgGlyCysIleValAlaValPheAlaIle
                                                                                                                                                                                                                                                                                GCCCCTCCTGTTGTC-----
                                                                                                                          GGTCTCCAGAGTCTCTGTCAAGAA
                                                                                                                                                                                                                                                                                                                            TTCTGCACCTCCTGTTGTCACACACCTTACCTGCACTTCCTGTTGTCACACACCCTTACCT 35622
                                                                                                                                                                                               ThrGlnThrCysGlyAsnCysThrPheArgValCysPheGluGlnCysCysProTrpThr 92
                                                                                                                                                                                                                                                                                                   ValAlaProMetThrProTyrLeuMetLeuCysGlnProH1sLysArgCysGlyAspLys 53
                                                                                                                                                                          ACACCTTATCTATCCTCATGTATCTTGCCAGCTGTTTTAAAGAGCTGCTGCCCTTGGTCT
                                                                                                                                                                                                                                                 PheTyrAspProLeuGlnHisCysCysTyrAspAspAlaVal---ValProLeuAlaArg
                                                                                                                                                                                                                                                                                                                                                          PheCysIleSer----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scores:
AC094152 11562/ pp Rattus norvegicus clone CH230-2122, 61 unordered pieces.
AC094152 GI:17940864
HTG; HTGS_PHASE1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            41223
42314
42414
43536
43636
44843
44943
46280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           40002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               38709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      39902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         31309
32536
32636
32636
34400
34500
35906
36006
37280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Rattus norvegicus"
/db_xref="taxon:10116"
/clone="CH230-6D18"
9169 c 10001 q 12470 +
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           52.1
94.50
32.41%
24.07%
14.15%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .4740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          79: gap of
07: contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gap of contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gap c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gap of contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             conti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              conti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 conti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          conti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   contig
gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       contig
                                                                                                                          35439
                                                                                                                                                                                                                                                                                                                                                       -----ArgLeuLeuCysSerHisGlyAlaPro 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of 1028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   unknown
of 1337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            f unknown
g of 1229
f unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             f unknown
f of 1406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of 1227
f unknown
g of 1764
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       unknown
of 1121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    unknown
of 1274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            of 1207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              of 1091
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      of 1122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 of 1193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             unknown
                                                                                                                                                                                                                                                                            ----ACACACCTTACCTGCACCTCCTGT 35583
                                                                     DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  bp in l
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   bp in
length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ďď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              dq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Leng
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2874 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         in
                                                        SEQUENCING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        length
                                                                     linear
                                                       HTG 20-DEC-2001
IN PROGRESS ***,
                                                                                                                                                                                                                                                  72
                                                                                                                                                                          35463
                                                                                                                                                                                                                                                                                                                                                                                                          20
```

(see http://www.hgsc.bcm.tmc.edu/docs/Genbank\_draft\_data.html).

NOTE: This is a 'working draft' sequence. It currently consists of 61 contigs. The true order of the pleces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence

as soon as it is available and the accession number will

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Morgan, M., Morris, S., Moser, M., Neal, D., Newtson, J., Newtson, N., Nguyen, A., Nguyen, N., Nguyen, N., Nickerson, E., Nwokenkwo, S., Oguh, M., Okwuonu, G., Oragunye, N., Oviedo, R., Pace, A., Payton, B., Peery, J., Perez, L., Peters, E., Pickens, R., Primus, E., Pu, L. L., Ouiles, M., Ren, Y., Rives, M., Rojas, A., Rojubokan, I., Rolfe, M., Ruiz, S., Savery, G., Scherer, S., Scott, G., Shen, H., Shooshtari, N., Sisson, I., Sodergren, E., Sonaike, T., Sparks, A., Stanley, H., Stone, H., Sutton, A., Svatek, A., Tabor, P., Tamerisa, K., Tang, H., Tansey, J., Taylor, C., Taylor, T., Telfrod, B., Thomas, N., Thomas, S., Usmani, K., Vasquez, L., Vera, V., Villalon, D., Vinson, R., Wall, R., Wang, S., Ward-Moore, S., Warren, R., Washington, C., Walliams, G., Williamson, A., Wleczyk, R., Wooden, S., Woolen, S., Wu, C., Wu, Y., Wu, Y.F., Zhou, J., Zorrilla, S., Nelson, D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Carter,M., Cavazos,S.R., Chacko,J., Claveland,C.D., Cox,C., Chen,Z., Chowdhry,I., Christopoulos,C., Cleveland,C.D., Cox,C., Coyle,M.D., Dathorne,S.R., David,R., Davila,M.L., Davis,C., Davy-Carroll,L., Dederich,D.A., Delaney,K.R., Delagdao,O., Denn,A.L., Ding,Y., Dinh,H.H., Douthwaite,K.J., Draper,H., Denn,A.L., Ding,Y., Dinh,H.H., Douthwaite,K.J., Edwards,C.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hamilton, K., Harris, C., Harris, K., Hart, M., Havlak, P., Hawes, A., Helanandez, J., Hornandez, O., Hodgson, A., Hogues, M., Holloway, C., Hollins, B., Homsi, F., Howard, S., Huber, J., Hulyk, S., Hume, J., Joudah, S., Kalsson, B., Jia, Y., Johnson, R., Jolivet, S., Joudah, S., Karlsson, E., Kelly, S., Khan, U., King, L., Korvah, J., Kovar, C., Kratovic, J., Kureshi, A., Landry, N., Leel, B., Lewis, L.C., Lewis, L., Li, J., Li, Z., Lichtarge, O., Lieu, C., Liu, J., Liu, W., Louiseged, H., Lozado, R. J., Lu, X., Lucier, A., Lucier, R., Luna, R., Martinez, E., Massey, E., Mawhiney, E., McLeod, M. P., Meador, M., Martinez, E., Massey, E., Mahner, G., Miner, Z., Mitchell, T., Mohabbat, K., Morrigan, M., Morris, S., Moser, M., Neal, D., Newtson, J., Newtson, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alsbrooks, S.L., Amaratunge, H.C., Are, J.R., Banks, T., Barbaria, J. Benton, J., Bimage, K., Blankenburg, K., Bonnin, D., Bouck, J., Bowle, S., Brieva, M., Brown, E., Brown, M., Bryant, N.P., Buhay, C., Burch, P., Burkett, C., Burrell, K.L., Byrd, N.C., Carron, T.E., Carter, M., Cayagos, S.R., Chacko, J., Chavez, D., Chen, G., Chen, R., Chacko, J., Chavez, D., Chen, G., Chen, R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Worley, K.C.
Direct Submission
                                                                                                                                                                                                                                                                                                                         findPhrapList
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Weinstock, G. and Gibbs, R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Muzny,D.M., Adams,C., Adio-Oduola,B., Ali-osman,F.R., Alsbrooks,S.L., Amaratunge,H.C., Are,J.R., Banks,T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Norway rat.
Rattus norvegicus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Inpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (bases 1 to 115627)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (bases 1 to 115627)
                                                                Consensus quality: 93124 bases at least Q40 Consensus quality: 101400 bases at least Q30 Consensus quality: 107250 bases at least Q30 Consensus quality: 107250 bases at least Q20 Estimated insert size: 81290; sum-of-contigs estimation Quality coverage: 0x in Q20 bases; agarose-fp estimation Quality coverage: 1.1x in Q20 bases; sum-of-contigs.estimation
                                                                                                                                                                                                                                                                                                                                                                                                                         Center project Information Center project name: GACA Center clone name: CH230-2L22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Web site: http://www.hgsc.bcm.tmc.edu/Contact: hgsc-help@bcm.tmc.edu
                                                                                                                                                                                                                                                                                                                                                 ------ Summary Statistics
Assembly program: Phrap; version 0.990329First call to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Center code: BCM
Estimated insert size may differ from sequence length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Barbaria, J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tamerisa, K.,
```

																																•																																					
	*	* :	*	* :	* :	٠	*	*	*	*	*	×	٠,	+	*	*	*	¥		٠	*	*	*	*	*	*	*	*	*	. ,	•	*	*	*	*	*	*	*	*	*	*	*	*	*			. ,		* :		· *	×		<b>.</b> .	. *	*	*	*	. *	*	*	*	*	*	*	*	*	*	,
																																																																			į	9 6	ľ
	73225	בים הים ד	4 6	000	000	2 6	200	677	601	395	385	245	10	2 0	960	980	861	LCB	10	) t	٠ د د	462	452	254	244	040	030	812	208	0	7 0	את את	177	361	145	135	959	949	736	726	480	4 / 0	212	202	9 6	2 2	10	) ·	770	л U	1 6	3 6	10	200	69.5	625	200	287	038	028	726	126	0	93	96	8	1	preserve	
	73324:	2,5	9 6	192	200	9 6	873	272	611	601	395	385	10	7 5	776	960	980	990	0	0 0	י היי	500	460	452	254	244	039	029	2T8	202	0 0	7 0	יי עי	371	361	145	135	959	949	735	725	480	470	212	202	3 4	200	3 0	7 ·	777	100	160	2 2 2	110	001	635	625	297	287	038	028	726	16	03	93	96	186	קיני	
•	dap of	- C	ָ ֭֭֭֭֭֭֓֞֝֡֓֞֡֓֡֓֡֡֡֡֓֡֓֡֓֡֓֡֓֡֓֡֡֡֡֡֓֡֓֡֡֡֡֡֡֡֡	בי ליני	ָ מַלְּיִלְ מַלְּיִלְ	֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֡֓֓֓֓֓֡֓֓֓֡֓֡	֓֞֜֜֜֜֜֜֜֜֜֜֜֓֓֓֜֜֜֜֜֓֓֓֓֜֜֜֜֜֓֓֓֓֜֜֜֜֜֜	) t	ap o	onti	ap o	ontl	do o		2	ap o	onti	ap o	OHCI	2 2	ָ ֭֭֓֞֞֝֞֜֝֡֓֡֓֡	) † C	מ מ	)   	ap o	onti	ap c	onti	ap c	Oner	40	ָ קַ	2 7	מם כ	onti	ap c	onti	ap c	onti	ap c	onti	ap c	onti	ap c	onti	ap c	Onti	2		9 0	סחכו	gap or	Onti	٠ ٥	onti	ap c	onti	יסי ח	onti	ap o	onti	ap	onti	ap o	contig	ap o	onti	Adttabte	1 N N N N N N N N N N N N N N N N N N N
	nkno	2 C C	1 1 1 1		TOU	100		5 351	nknow	£ 205	know	139	TKHOW		f 140	nkno	f 225	know	T. 710	100		÷ :	2 4 1 2 1	1	nknow	m	nknow	217	Know	T 126	100	3 6 8 9 9	300	nknow	f 215	nknow	f 176	unknown	213	know	£ .245	know	£ 258	know	f 217	DKNOW	FRT	100	1	unknown	T 233	nkno	T 314	Know	£ 365	know	. ± 32	nknow	f 249	Know	301	nknow	f 213	nknow	Ť.	nknow	186	מונט	מות החת
,	length	בושליו	; ; ;	יפווש בוו	; 1 <u>1</u> 1 :	219 611	1	מיים ומי	na+h	Ď in	ength	bp in length	ength	Tri Tende	ייי הייי	ength	p r	en	ur d	end cu	7 1: 10:90		enoth	ا مر	nath .	Ď Ín	ength	bp in length	en	p in	enden	מיל מיל	to longt	ength	ō 'n	ength	Ö H	ngth		ength	p in	ength	5	ength	'n	ength	ur d	enden	1	בר בר	nr d	ength	ur d	ength	p in	ength	in	ength	in	ength	ב	ength	Ď	ength	'n	ength	bp in length	e accession number	CPSSICO

```
US-09-092-297-17 (1-117) x AC094152 (1-115627)
                                                                                                                                                                     Query Match:
                                                                                                                                                                              Best Local Similarity:
                                                                                                                                                                                       Percent Similarity:
                                                                                                                                                                                                          Pred. No.:
                                                                                                                                                                                                                   Alignment Scores:
                               85922
                                                                                                       86038
                                                                  85978
            56
                                                                          21 PheCysIleSerArgLeuLeuCysSerHis------
                                                                                                                      1 ProLeuGlnProProArgAlaMetAlaProArgGlyCysIleValAlaValPheAlaIle
AspProLeu-----GlnHisCysCysTyrAspAspAlaValValProLeuAlaArgThr
                         GTGCTCACACTGCTGTGCTCACACTGCTCTTCCCAC---TGCTGTGCTCCCACTGCTGTG
                                                              CTGTGC---TCACA-CTGCTGTGCTCACACTGTTCTTCCCACTGCTGTGCTCCCACTGCT
                                           ProMetThrProTyrLeuMetLeuCysGlnProHisLysArgCysGlyAspLysPheTyr
                                                                                                   CCACTGCCGTGCTCCCACTGCTGTGCTCCCACTGCCCTTCCCACTGCTGCTGCTCCCACTG
                                                                                                                                                                                                                                                                                                                              99061
99161
100284
100384
101496
                                                                                                                                                                                                                                                                        106852
                                                                                                                                                                                                                                                                                                     03424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    80103
80203
81856
81956
                                                                                                                                                             135
94.50
40:54%
33.33%
14.15%
                                                                                                                                                                                                                                                                               gap of contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                    gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                           gap o
                                                                                                                                                                                                                                                             contig
                                                                                                                                                                                                                                                                        gap of
                                                                                                                                                                                                                                                                                                  contig
                                                                                                                                                                                                                                                                                                                             gap o
                                                                                                                                                                                                                                                                                                                                                gap of
                                                                                                                                                                                                                                                                                                                                                                 gap of
                                                                                                                                                                                                                                                                                                                                                                                     gap of
                                                                                                                                                                                                                                                                                                                                                                                              conti
                                                                                                                                                                                                                                                                                                                                                                                                      gap o
                                                                                                                                                                                                                                                                                                                                                                                                                         gap o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gap o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gap o
                                                                                                                                                                                                                                                                                                                                                          contig
                                                                                                                                                                                                                                                                                                                                                                            contig
                                                                                                                                                                                                                                                                                                                                                                                                                 contig
                                                                                                                                                                                                                                                                                                                                                                                                                                  contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        conti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gap o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gap o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gap o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gap o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gap o
                                                                                                                                                                                     Length:
Matches:
Conservative:
                                                                                                                                                          Gaps:
                                                                                                                                                                  Mismatches:
Indels:
                                                                                                                                                                                                                                                                                g of 1801
                                                                                                                                                                                                                                                                                                                                      unknown
of 1112
                                                                                                                                                                                                                                                                                                                                                         of 1123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            of 1319
                                                                                                                                                                                                                                                                                                   of 1527
                                                                                                                                                                                                                                                                                                             unknown
                                                                                                                                                                                                                                                                                                                              unknown
                                                                                                                                                                                                                                                                                                                                                                            of 1793
                                                                                                                                                                                                                                                                                                                                                                                     unknown
                                                                                                                                                                                                                                                                                                                                                                                                      unknown
                                                                                                                                                                                                                                                                                                                                                                                                                         unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                  of 1224
                                                                                                                                                                                                                                                                                                                                                                                                                                           unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                      of 1133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                unkn
                                                                                                                                                                                                                                                                                                                                                                                                                                                             unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of 1432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                of 1409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  of 1689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of 1195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      of 1653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        of 1458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of 1138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              of 2393
                                                                                                                                                                                                                                                            bp in length
                                                                                                                                                                                                                                                                               bp in length
                                                                                                                                                                                                                                                                                                                   bp in length
                                                                                                                                                                                                                                                                                                                                                                            nr dq
                                                                                                                                                                                                                                                                                                           length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    bp in length
                                                                                                                                                                                                                                                                     length
                                                                                                                                                                                                                                                                                        length
                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                             length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              bp in length
                                                                                                                                                                                                                                                                                                                           ength
                                                                                                                                                                                                                                                                                                                                                                                     .ength
                                                                                                                                                                                                                                                                                                                                                ength
                                                                                                                                                                                                                                                                                                                                                                                                                         ength
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ength
                                                                                                                                                                                                                                                                                                                                                                 ength
                                                                                                                                                                                                                                                                                                                                                                                                      ength
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ength
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ength
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ength
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ength
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ength
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ength
                                                                                 ----GlyAlaProValAla
                                                                                                                                                                                                                                                                                                 in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         in length
                                                                                                                                                                                              115627
37
                                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                                                                                                       length
                                                                                                                                                                                                                                                                                                                                                                                                                                length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           length
                                                                                                                                                                                                                                                                                                                                     length
                                                                                                                                                                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                                                                                                                                           length
                                                                                                                                                                                                                                                                                                                                                                                                              length
                                                                                                                                                                                                                                                                                                                                                                                                                                                   length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           length
                                              55
                                                                                                    85979
                                                                                                                      20
                                                               85923
                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
TITLE
                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AC087564/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          74
```

Š 밁 δÃ

```
85758 GTGCTCACACTGCTGTGCTCACACTGCTCTTCC 85726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          85865 CTCCCACTGCTGCTCCCACTGCTGCTCACACTGCTGCTCACACTGTTCTTCCCA 85806
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GlnThrCysGlyAsnCysThrPheArgValCysPheGluGlnCysCysProTrpThrPhe 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MetValLysLeuIleAsnGlnAsnCysAspSer 104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens chromosome 16 clone SEQUENCE, 4 ordered pieces.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence Quality Assessment:
This entry has been annotated with sequence quality estimates computed by the Phrap assembly program.
All manually edited bases have been reduced to quality and the phrap assembly program.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence Quality Assessment:

This entry has been annotated with sequence quality estimates computed by the Phrap assembly program.

All manually edited bases have been reduced to quality zero. Quality levels above 40 are expected to have less than 1 error in 10,000 bp.

Base-by-base quality values are not generally visible from the GenBank flat file format but are available as part of this entry's ASN.1 file.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Direct Submission
Submitted (10-JAN-2001) Production Sequencing Facility, DOE Joint
Genome Institute, 2800 Mitchell Drive, Walnut Creek, CA 94598, USA
On Nov 7, 2001 this sequence version replaced gi:13786430.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 (bases 1 to 158325)
DOE Joint Genome Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 (bases 1 to 158325)
DOE Joint Genome Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequencing of Human Chromosome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HTG; HTGS_PHASE2; HTGS_DRAFT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AC087564.3 GI:16756236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Quality levels above 40 are expected to have less than 1 error in 10,000 bp.
Base-by-base quality values are not generally visible from GenBank flat file format but are available as part
                                                                                                                                                                                                                                                                                                                                                                                                                          NOTE: This is a 'working draft' sequence. It currently consists of 4 contigs. Gaps between the contigs are represented as runs of N. The order of the pieces is believed to be correct as given, however the sizes of the gaps between them are based on estimates that have provided by the submittor.

This sequence will be replaced by the finished sequence as soon as it is available and by the finished sequence as soon as it is available and
                                                                                                                                                   the accession number will be preserved.

1 53925: contig of 53925 bp in length
53926 54025: gap of unknown length
54026 59941: contig of 5916 bp in length
59942 60041: gap of unknown length
60042 149551: contig of 89510 bp in length
149552 146651: gap of unknown length
149652 158325: contig of 8674 bp in length.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               of this entry's ASN.1 file.
/organism="Homo sapiens"
/db_xref="taxon:9606"
/chromosome="16"
                                                                                                                                     Location
                                                                                                                                 /Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -----TGTGC-TCACACTGCTGCTCACACTGCT 85759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HTGS_ACTIVEFIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA linear H
RP11-437L7, WORKING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             to quality
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HTG 07-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DRAFT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 zero.
```

```
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 13
AE005499
                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                EYWORDS
                                                                                                                                                                                                                                                                                                                                  /ERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-092-297-17 (1-117) x AC087564 (1-158325)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment Scores:
                                                                                  JOURNAL MEDLINE
                                                                                                                                                                                                                   AUTHORS
                                                                     PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                               36394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            36514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       36622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    36736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     36796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ۵
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTTGTCTTTGTCATTTGGATTCAGAGACAAATCTAAAGACAGCAGATCTGCCCTCTGCCT 36455
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATGAGGCTCTGT 36383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AspArgLeuCys 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TATTGCTGCTATTTCAACCATGACATTATTAAACTTCTGAATCTT-----AGT 36515
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HisCysCysTyr---AspAspAlaValValProLeuAlaArgThrGlnThrCysGlyAsn 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATCTGCCCGCCTTAGCCCCCAAAGTGCTGGGATTATAGGCGTGAGCCACTGCACCTGGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ---SerArgLeuLeuCysSerHisGlyAlaProValAlaProMetThrProTyrLeuMet 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GACTACAGGTGCATACCACCACGCCCAGTTATTATTATTATT-----ATTTTTTGTATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGCAACCTCCACCTCCTGGGTTCAAGCTATTCTCCTGCCTCAGCCTCCTGAGTAGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LeuGlnProPro-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -----ThrPheMetValLysLeuIleAsnGlnAsnCysAspSerAlaArgThrSerAsp 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CysThrPheArgValCysPhe-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LeuCysGlnPro---HisLysArgCysGlyAspLysPheTyrAspProLeuGln-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTTAGTAGAGACGTGGTTTCACCATGTTGGCCAGGATTGTCTCAATCTCCTGACCTCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -----ArgAlaMetAlaProArgGlyCysIleValAlaValPheAlaIlePheCysIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCTGAACCTTCCAGAGACAGCCCCGCTAACACACAGGTAACAAAGCTCAGGCCAGCGAT 36395
                                                                                                                              Perna, N.T., Plunkett, G. III, Burland, V., Mau, B., Glasner, J.D., Rose, D.J., Mayhew, G.F., Evans, P.S., Gregor, J., Kirkpatrick, H.A., Posfai, G., Hackett, J., Klink, S., Boutin, A., Shao, Y., Miller, L., Grotbeck, E.J., Davis, N.W., Lim, A., Dimalanta, E., Potamousis, K., Apodaca, J., Anantharaman, T.S., Lin, J., Yen, G., Schwartz, D.C., Welch, R.A. and Blattner, F.R.
                                                                                  Genome sequence of enterchaemorrhagic Escherichia coli 0157:H7
Nature 409 (6819), 529-533 (2001)
21074935
                                                                                                                                                                                                                                                                                                                                                               10197
Escherichia coli 0157:H7 EDL9
of 290
             Perna, N.T., Plunkett, G. Rose, D.J., Mayhew, G.F.,
                                Perna, N.T.,
                                                                                                                                                                                                                                                                          Escherichia coli 0157:H7 EDL933.
Escherichia coli 0157:H7.EDL933
                                                                                                                                                                                                                                                                                                                             AE005499 AE005174
AE005499.1 GI:12
                                                                                                                                                                                                                                                             Bacteria; Proteobacteria;
                                                                     1206551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   44657
                                                  (bases 1 to 10197)
                                                                                                                                                                                                                             (bases 1 to 10197)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /clone="RP11-437L7"
34364 c 33282 g
                                                                                                                                                                                                                                                                                                                               GI:12517151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     437
91.00
40.97%
27.78%
13.62%
 Klink, S.,
III, Burland, V., Mau, B.,
Evans, P.S., Gregor, J., K.
Klink, S., Boutin, A., Shao
                                                                                                                                                                                                                                                                                                                                                                            0197 bp
EDL933
                                                                                                                                                                                                                                                             gamma subdivision; Enterobacteriaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   45690
                                                                                                                                                                                                                                                                                                                                                                           genome,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -----GluGlnCysCysProTrp---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 d
                                                                                                                                                                                                                                                                                                                                                                      contig 3 of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 332 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                158325
40
19
19
47
38
u,B., Glasner,J.D.
J., Kirkpatrick,H.
Shao,Y., Miller,I
                                                                                                                                                                                                                                                                                                                                                                            section
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               36623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  36563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               36683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 36737
             Α.
```

```
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                       CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                          gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Grotbeck, E. J., Davis, N. W., Lim, A., Apodaca, J., Anantharaman, T.S., Lin, Welch, R. A. and Blattner, F. R. Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Submitted (22-OCT-2000) Laboratory of Genetics, Wisconsin, 445 Henry Mall, Madison, WI 53706, US
                                            GHODRFORLITTLROVLECDASALLRYDSROFIPLAIDGLAKDVLGRRFALEGHPRLE
AIARAGDVVRFPADSELPDPYDGLIPGOESLKVHACVGLPLFAGONLIGALTLDGMOP
DQFDVFSDEELRLIAALAAGALSNALLIEQLESQNMLPGDAAPFEAVKOTOMIGLSPG
                                                                                                                /product="putative 2-component transcriptional regulator"
/protein_id="AAG57816.1"
/db_xref="GT:12517154"
/translation="MSSQNDYQSNGRYDNIYSQIDSEAKMSFSVDVLANIAIELQRGI
                                                                                                                                                                                                                                                                    MG1655: B2709"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LVAVCDAQQQVQGVFTDGDLRRWLVGGGALTTPVNEAMTVGGTTLQSQSRAIDAKEII
MKRKITAAPVVDENGKLTGAINLQDFYQAGII"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       / Trans lation="MLELQBASRLPERLGDDFVRAANIILHCEGKVVVSGIGKSGHIG
KKIAATLASTGTPAFFVHPAEALHGDLGMIESBDVMLFISYSGGAKELDLIIPRLEDK
SIALLAMTGRTSPLGLAAKAVLDISYEREACPMHLAPTSSTYNTLMMGDALMAAVMO
ARGFNEEDFARSHPAGALGARLLNKVHHLMRRDDAIPQVALTASVMDAMXELSRTGLG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note="Residues 1 to 308 to residues 1 to 308 of 3 Strain MG1655; B2708"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note="Residues 10 to
to residues 38 to 257
Strain MG1655: B2707"
                                                                                                                                                                                                                                                                                   /note="Residues 1 residues 1 to 529
                                                                                                                                                                                                                                                                                                                                                                                                                                                          complement(1751.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /translation="MTPQAQLFAKNLVILEHAGTVIRTYGGVVLNKEESDPPIDHKTL
INTHKKELIAEAAVGFIHDGDSIILDAGSTVLQMVPLLSRFNNITVMTNSLHIVNALS
ELDNEQTILMPGGTFRKKSASFHGQLAENAFEHFTFDKLFMGTDGIDLNAGVTTFNEV
YTVSKAMCNAAREVILMADSSKFGRKSPNVVCSLESVDKLITDADIDPAFRQALEEKG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note-
107. .
                                                                                                                                                                                                                                                                                                                                                                                  complement(1751.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /product="orf, hypothetical protein"
/protein_id="AAG57815.1"
/db_xref="GI:12517153"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Carbon compounds
ESELFGHYKGAFTGAISNRSGKFEMADNGTLFLDEIGELSLALQAKLLRVLQYGDIQ
                                                                                                                                                                                                                     transl_table=11
                                                                                                                                                                                                                                         codon_start=
                                                                                                                                                                                                                                                                                   /function="putative regulator; Not classified"
note="Residues 1 to 529 of 529 are 99.43 pct identical
residues 1 to 529 of 529 from Escherichia coli K-12 Stra
                                                                                                                                                                                                                                                                                                                                                          'gene="ygaA"
                                                                                                                                                                                                                                                                                                                                                                                                             'note="Z4017"
                                                                                                                                                                                                                                                                                                                                                                                                                                      /gene="ygaA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        product- orf,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /gene="gutQ"
/function="orf; Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /transl_table=11
/product="regulator fo
/protein_id="AAG57814...
/db_xref="GI:12517152"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                transl_table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DVIITGESNE"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ′gene≖
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /serotype="0157:H7"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism-"Escherichia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gene="gutQ"
note="24015"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              'function="regulator; Degradation of small
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                'gene≖"srlR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          db_xref="taxon:155864"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           strain-"EDL93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             note="Z4014"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "enterohemorrhagic"
.796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       _start=
                                                                                                                                                                                                                                                                                                                                                                                  .3340)
                                                                                                                                                                                                                                                                                                                                                                                                                                                       .3340)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 for gut
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 229 of 229 are 98.63 pct identical of 257 from Escherichia coli K-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A., Dimalanta, E.,
Lin, J., Yen, G., S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               coli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             function"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              308 are 100.00 pct identical from Escherichia coli K-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (srl),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               O157:H7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 glucitol
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ., Potamousis, K., Schwartz, D.C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          University
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     molecules:
                                                                                                                                                                                                                                                                                   Strain
```

gene CDS

```
LVDKKYVPELCDDIAPGLNEVGVMLPANPLQHLLLQELQCPLVMTSGNLSGKPPAISN
EQALEDLQGIADGFLIHNRDIVQRMDDSVVRESGEMLRRSRGYVPDALALPPGFKNVP
PVLCLGADLKNTFCLVRGEQVVLSQHLGDLSDDGIQTQWREALKLMQNIYNFTPQYVV
                                                                                                                                                                         GVEVRLLEDPETFLVQLHQHCPPLARIDSVEREPFIWSQLPTEFTIRQSAGGAMNTQI
VPDAATCPACLAEMNTPGERRYRYPFINCTHCGPRFTIIRAMPYDRPFTVMAAFPLCP
ACDKEYRDPLDRRFHAQPVACPECGPYLEWVSHGEHAEQEAALQAAIAQLKMGNIVAI
KGIGGFHLACDARNSNAVATLRARKHRPAKPLAVMLFVADGLPDAARQLLTTPAAPIV
                                              NGALWGGECLRVNYRECEHLGGLPAVALPGGDLAAKQPWRNLLAQCLRFVPEWQNYPE
                                                                           HDAHPGYVSCQWASEMNLPTQTVLHHHAHAAACLAEHQWPLDGGDVIALTLDGIGMGE
                                                                                                                                                                                                                                                                         /product-"transcriptional regulatory protein"
/protein_id="AAG57819.1"
/db_xref="GI:12517157"
/translation="MAKNTSCGVQLRIRGKVQGVGERPFVWQLAQQLNLHGDVCNDGD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /translation="MSIVVKNNIHWVGORDWEVRDFHGTEYKTLRGSSYNSYLIREEK
NVLIDTVDHKESREFVQNLRREIDLADIDYIVIHAEEDHAGALTELMAQIPDTPIYG
TANALDSINGHHHHERWHFNVVKTGDTLDIGNGKQLIFVETPMLHWPDSMMTYLTGENL
VLFSNDAFGGHYCDEHLFNDEVDGTELFEQCORYYANILTPESRLVTPKITEILGFNL
VLFSNDAFGGHYCDEHLFNDEVDGTELFEQCORYYANILTPESRLVTPKHTAENAADAIAQGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /function-"regulator; Energy metabolism, carbon: Anaerobic respiration"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       complement (5945.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               complement(5945.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CRAGKMYTLIDNAASILASLMPPEVSSRLQHRLTEMGYHLLLKSQLQGLEKTDSGILA
FLDHQRSIEVDAVIAATGLRPETALARRAGLTINRGVCVDSYLQTSNADIYALGDCAE
INGQVLPFLQPIQLSAMVLAKNLLGNNTPLKLPAMLVKIKTPELPLHLAGETQRQDLR
WQINTERQGMVARGVDDADQLRAFVYSEDRMKEAFGLLKTLPV"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /translation="MSNGIVIIGSGFAARQLVKNIRKQDASIPLTLIAADSMDEYNKP
DLSHVISQGQRADDLTRQTAGEFAEQFNLLLFPQTWYTDIDAEARVVKSQNNQWQYDK
LVLATGASAFVPPVPGRELMLTLNSQQEYRACETQLRDARRVLIVGGGLIGSELAMDF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CPECSLGKDVFDELASEAK"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AETDPRVAVDRLSTRLQDÄGFEMSLSLKAKWRPDQDALELCREHGREIARQWALAPLP
QSTVNTVVKEETSATTTADLGPRWQCSVCQWIYDPAKGEPWQDVAPGTPWSEVPDNFL
                                                                                                                                                                                                                                                                                                                                                                                      transl_table=11/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /function="putative enzyme; Not classified"
/note="Residues 1 to 377 of 377 are 97.87 pct identical to residues 1 to 377 of 377 from Escherichia coli K-12 Strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RVGDDRSLRVDVRVLAATNRDLREEVLAGRFRADLFHRLSVFFLSVPPLRERGDDVIL
LAGYFCEQCRLRQGLSRVVLSAGARNLLQHYSFPGNVRELEHAIHRAVVLARATRSGD
EVILEAQHFAFPEVTLPPPEVAAVPVVKQNLREATEAFQRETIRQALAQNHHNWAACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                       note="Residues 1 to 750 of 750 are 97.86 pct identical to residues 1 to 750 of 750 from Escherichia coli K-12 Strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /product="putative oxidoreductase"
/protein_id="AAG57818.1"
/db_xref="G1:12517156"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  мG1655: в2711°
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /gene="ygbD"
/note="Z4019"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Strain MG1655: B2710"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /function="putative enzyme; Not classified"
/note="Residues 1 to 285 of 411 are 100.00 pct identical
to residues 1 to 285 of 479 from Escherichia coli K-12
                                                                                                                                                                                                                                                                                                                                                                                                                codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ′gene="ygbD"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RMLETDVANLHRLAKRLGLKD"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                'transl_table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /product="putative flavodoxin"
/protein_id="AAG57817.1"
/db_xref="GI:12517155"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           transl_table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             codon_start=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             'gene="Z4018"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          . 5817
                                                                                                                                                                                                                                                                                                                                                                                                                                          B2712"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24018"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .8197)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8197)
                                              LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                         RESULT 14
AP002562
                                                                                                                                                                                                                                                 Вр
                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                       SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-092-297-17 (1-117) x AE005499 (1-10197)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
                                                                                                                                                                                                                                                 8595
                                                                                                                                                                                                                                                                                                                                                    8535
                                                                                                                                                                                                                                                                                                                                                                                                                                                       8496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Мо
::
                                                                                                                                                                                                                                                                                                   76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   41
                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ü
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 ProLeuGlnProPro----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGCAAGCCGCCATACACGCCGGGCCGTYTTCACGATGGTTGCACAGGTCGCATTTATTGG 8495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTTCTGCGCTCAGTTGTTCAAGTTTATTGC---GATCGACACAAATTAGCGCATGGGTCG 8435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Val-----AlaValPheAlaIlePheCysIleSerArgLeuLeuCysSerHisGlyAla 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCTTTGATGCCAGAACAGTTCTGTAAGATTTTTAGAACATCAGCGCCGTACGGCGCGTT
                                                                                                                                                                                                                                          AGGTTTTGCAACCAATGCAACGTTCCTGCATCACATGAACAA 8636
                                                                                                                                                                                                                                                                                           -----CysGlyAsnCysThrPheArgValCysPheGluGln
                                                                                                                                                                                                                                                                                                                                          TGTTGCGAATCACCGGACGTACCACCACTTCCATCGCGCCATACGGGCAAGCCACAACGC 8594
                                                                                                                                                                                                                                                                                                                                                                                           CysCysTyrAspAspAlaValValProLeuAlaArgThrGlnThr-------
                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTTCGGCTTTGTCAGCCC----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LeuMetLeuCysGlnProHisLysArgCysGlyAspLysPheTyrAspProLeuGlnHis 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ProValAlaProMetThrPro-----
Escherichia coli 0157:H7 (strain:0157:H7, sub_strain:RIMD 0509952)
                                                                   AP002562 BA000007
AP002562.1 GI:13
                                                                                                             AP002562 270365 bp DNA Escherichia coli O157:H7 DNA, complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /function="regulator; Degradation
Carbon compounds"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           complement(9026.
/gene="ascG"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EQLSAEKRRRTALMF" (9026. .10039)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /transl_table=11
/product="involved in electron
hydrogen, Fe-S centers"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    complement(8350. .8877)
/gene="hydN"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /translation="MNRFIIADASKCIGCRTCEVACVVSHQENQDCASLTPETFLPRI
HVIKGVNISTATVCRQCEDAPCANVCPNGAISRDKGFVHVMQERCIGCKTCVVACPYG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MG1655: B2713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note="Residues 1 to 175 of 175 are 99.42 pct identical to residues 1 to 175 of 175 from Escherichia coli K-12 Strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       complement(8350.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QATMRGITTLVFSGGVIHNRLLRARLAHYLADFTLLFPQSLPAGDGGLSLGQGVIAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             amevvvrpvirnsgaglnvradkaeankcdlcnhrebgpacmaacpthalicvdrnkl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      respiration"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RWLAGEVQNG"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'gene="ascG"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /protein_id="AAG57820.1"
/db_xref="GI:12517158"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        note="24021"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /gene≖"hydN"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        function="enzyme; Energy metabolism, carbon:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            33.9
89.50
35.09%
27.19%
13.40%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -----ArgAlaMetAlaProArgGlyCysIle 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .10039)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                          -GTACATTCAGCCCTGCGCCGC 8534
                                                                                                               linear
genome, se
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               transport
```

6339 3<u>1</u>

-Tyr 40

8378

75

ear BCT section 1

07-MAR-2001 13/20.

of small

molecules:

from

formate

ç

Anaerobic

gene

CDS

gene

Sg

CDS

```
JOURNAL
MEDLINE
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
MEDLINE
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Shinagawa,H. Complete nucleotide sequence of the prophage VTI-Sakai carrying the Shiga toxin 1 genes of the enterohemorrhagic Escherichia coli 0157:H7 strain derived from the Sakai outbreak Gene 258 (1-2), 127-139 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Information Research Center; 3-1, Yamaqaoxa, Juliu, Japan (E-mail:ken@gen-info.osaka-u.ac.jp, Japan (E-mail:ken@gen-info.osaka-u.ac.jp/, Tel:81-6-6879-8365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Fax:81-6-6879-2047)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted (26-JUN-2000) Ken Kurokawa,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ohnishi, M., Kurokawa, K., Makino, K., Yasunaga, T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Complete genome sequence of enterohemorrhagic Escherichia coli
0157:H7 and genomic comparison with a laboratory strain K-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hayashi,T., Makino,K.; Ohnishi,M., Kurokawa,K., Ishii,K., Yokoyama,K., Han,C.-G., Ohtsubo,E., Nakayama,K., Murata,T., Tanaka,M., Tobe,T., Iida,T., Takami,H., Honda,T., Sasakawa,C., Ogasawara,N., Yasunaga,T., Kuhara,S., Shiba,T., Hattori,M. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Yokoyama,K., Makino,K., Kubota,Y., Watanabe,M., Kimura,S., Yutsudo,C.H., Kurokawa,K., Ishii,K., Hattori,M., Abe,H., Iida,T., Yamamoto,K., Hayashi,T., Yasunaga,T., Honda,T., Sasakawa,C. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Comparative analysis of the whole set of rRNA operons between an enterohemorrhagic Escherichia coli 0157:H7 Sakai strain and an Escherichia coli K-12 strain MG1655
Syst. Appl. Microbiol. 23 (3), 315-324 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Complete nucleotide sequence of the prophage VT2-Sakai carrying the verotoxin 2 genes of the enterohemorrhagic Escherichia coli 0157:H7 derived from the Sakai outbreak Genes Genet. Syst. 74 (5), 227-239 (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0157:H7 and genomic comparison with DNA Res. 8 (1), 11-22 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ohnishi,M., Murata,T., Nakayama,K.,
Kurokawa,K., Yasunaga,T., Yokoyama,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Makino,K., Yokoyama,K., Kubota,Y., Yutsudo,C.H., Kimura,S., Kurokawa,K., Ishii,K., Hattori,M., Tatsuno,I., Abe,H., Iida,T., Yamamoto,K., Ohnishi,M., Hayashi,T., Yasunaga,T., Honda,T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hayashi,T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Kurokawa,K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sasakawa, C. and Shinagawa, H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Makino, K., Yokoyama, K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bacteria; Proteobacteria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Escherichia coli 0157:H7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Escherichia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (bases 1 to 270365)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (sites)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           project.
                                                                                                                                                                                                                          /note="similar to SSEB_ECOLI gi|1788871 percent identity
98 in 261 aa (Conserved in E.coli K-12)"
                  /translation="MVLMSETKNELEDILEKAATEPAHRPAFFRTLLESTVWVPGTAA
QGEAVVEDSALDLQHWEKEDGTSVIPFFTSLEALQQAVEDEQAFVVMPVRTLFENTLG
                                                                         /evidence-not_experimental
/product-"enhanced serine
/protein_id-"BAB36811.1"
/db_xref-"GI:13362859"
                                                                                                                                                                                                                                                                                                                                 /gene="ECs3388"
                                                                                                                                                                                                                                                                                 complement(435. .1220)
/gene="ECs3388"
{	t e}{	t TLFLNAKLPTGKEFMPREISLLIGEEGNPLSSQEILEGGESLILSEVAEPPAQMIDS}
                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Escherichia coli 0157:H7"
/strain="0157:H7"
                                                                                                                                                                                  transl_table=11
                                                                                                                                                                                                                                                                                                                                                                                   db_xref="taxon:83334"
                                                                                                                                                                                                                                                                                                                                                                                                          'sub_strain="RIMD 0509952"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .270365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gamma subdivision;
                                                                                                                           sensitivity"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  , Kuhara, S., Ha
, K., Makino, K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Enterobacteriaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hattori,M.,
K., Shinagawa,H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Shinagawa, H. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  565-0871,
```

```
/evidence=not_experimental
/product="molecular chaperone"
/protein_id="BaB36815.1"
/db_xref="g1:13363863"
/translation="MALLQISEPGLSAAPHQRRLAAGIDLGTTNSLVATVRSGQAETL
ADHEGRHLLPSVVHYQQQGHSVGYDARNAALDTANTISSVRKIMGRSLADQORYPH
LPYQFQASENGLPHIETAAGILHVPRYSGADIKKALAARATEALAGELDGVVITVPAYF
DDAQRQGTKDAARLAGLHVLRLLNEPTAAAIAYGLDSGQEGVLAVYDLGGGTEDISIL
RLSRGVTEVLATGGDSALGGDDFDHLLADYIREQAGIPDRSDNRVQRELLDAAIAKI
RLSRGVTEVLATGGDSALGGDDFDHLLADYIREQAGIPDRSDNRVQRELLDAAIAKI
                                                                                                                                                                                                                                                                                                                                                                                                                                 complement(3364. .5214)
/gene="ECs3392"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACLVGKGITFDSGGYSIKQTAFNDSMKSDMGGÅATVTGALAFAITRGLNKRVKLFLCC
ADNLISGNAFKLGDIITYRNGKKVEVMNTDAEGRLVLADGLIDASAQKPEMIIDAATL
TGAAKTALGNDYHALFSFDDALAGRLLASASQENEPFWRLPLAEFHRSQLPSNFAELN
                             ALSDADSVTVNVAGWQGEISREQFNELIAPLVKRTLLACRRALKDAGVEADEVLEVVM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   complement(3364.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /translation="MPKIVILPHQDLCPDGAVLEANSGETILDAALRNGIEIEHAGEK
SCACTTCHCIVREGFDSLÞESSEQEDDMLDKAWGLEÞESRLSCQARVTDEDLVVEIPR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /translation="mglkwtdsreigealydaypdldpktvrftdmhqwicdledfdd
DPQASNEKILEAILLVWLDBAE"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /product="putative peptidase"
/protein id="BAB36812.1"
/db_xref="G1:13362860"
/tanslation="MEPSCNANHLAEKSWGCOLAALLORRITKMTEAMKITLSTOPAD
ARWGEKATYSINNDGITLHLNGADDLGLIQRAARKIDGLGIKHVQLSGEGWDADRCWA
FWGGKKAFKGTRKVEWPDLLDAGROELDRIMIIDWYRDTINAPAEELGPSOLAGRAV
/GGSTRVPLVRERVGEFFGRPPLTSIDPDKVVAIGAAIQADILVGNKPDSEMLLLDVI
                                                                                                                                                                                                                                                                                                                                                                       /note="similar to HSCA_ECOLI gi|1788875
100 in 616 aa (Conserved in E coli K-12)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   YTINHAREH"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 complement(3027. .3362)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         complement(3027. .3362)
                                                                                                                                                                                                                                                                                                                  transl_table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /gene="ECs3392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /protein_id="BAB36814.1"
/db_xref="GI:13362862"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /evidence=not_experimental
/product="[2FE-2S] ferredo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     identity 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /gene="ECs339;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /transl_table=11
/evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               complement(2815. .3015)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       complement(2815.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NTGSAAYPAGASTAAGFLSHFVENYQQGWLHIDCSATYRKAPVEQWSAGATGLGVRT1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DLISNVASDRVTYRITKGEDLREQGYMGLHTVGRGSERSPVLLALDYNPTGDKEAPVY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99 in 456 aa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            complement(1354. .2724)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       complement(1354. .2724)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LTTLFKTIKPVKRAFICSIKENEEAQPNLLIGIEADGDIEEIIQVAGSVATDTLPGDE
PIDICQVKKGEKGISHFITEHIAPFYERRWGGFLRDFKQNRII"
                                                                                                                                                                                                                                                                                                                                                     'codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 transl_table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  'codon_start=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               note-"similar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /gene="ECs3391"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /protein_id="BAB36813
/db_xref="GI:13362861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'note-"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     'gene="ECs3390"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /gene="ECs3390"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /transl_table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /gene="ECs3389"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /gene="ECs3389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     product="hypothetical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   codon_start=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    note="similar to PEPB_ECOLI gi|1788872 percent identity in 456 aa (Conserved in E.coli K-12)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .coli K-12)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              dentical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ar to FER_ECOLI gi|11999|sp|P25528 percent
in 111 aa (Conserved in E.coli K-12)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        to YFHJ_ECOLI gi|1788873 (Conserved
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .3015)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ferredoxin"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     aı protein"
                                                                                                                                                                                                                                                                                                                                                                                  percent identity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'n
```

gene CDS CDS

gene

```
US-09-092-297-17 (1-117) x AP002562 (1-270365)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment Scores:
                                                                                                                                                                                                                                                                                        186890 CCTTTGATGCCAGAACAGTTCTGTAAGATTTTTAGAACATCAGCGCCGTACGGCGGCGTT 186949
       187067
                                                                                                                                                                                        186950 TTTCTGCGCTCAGTTGTTCAAGTTTATTGC---GATCGACACAAATTAGCGCATGGGTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
..
                                                                                                                                                     ü
                                                                                                                                                                                                                                      15 Val-----AlaValPheAlaIlePheCysIleSerArgLeuLeuCysSerHisGlyAla 32
                                                                                                                                                                                                                                                                                                                                                1 ProLeuGlnProPro-----
                                          LeuMetLeuCysGlnProHisLysArgCysGlyAspLysPheTyrAspProLeuGlnHis
                                                                                           GGCAAGCCGCCATACACGCCGGGCCGTCTTCACGATGGTTGCACAGGTCGCATTTATTGG
                                                                                                                                                  ProvalAlaProMetThrPro-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /evidence-not_experimental
/product="MifU-like protein"
/protein_1d="BAB36818.1"
/protein_1d="BAB36818.1"
/db_xref="G1:13362866"
/translation="MAYSEKVIDHYENPRNVGSFDNNDENVGSGMVGAPACGDVMKLQ
IKVNDEGIIEDARFKTYGCGSAIASSSLVTEWVKGKSLDEAQAIKNTDIAEELELPPV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   complement(6182. .6568)
/gene="ECs3395"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    complement(6182. .6568)
/gene="ECs3395"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            complement (5842. . 6165)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /translation="mdyftleglparyqldTqalslreqdlqrqyhpdKeasgsqaeq
LAAVQQSATINQAWQTLRHPLMRAEYLLSLHGFDLASEQHTVRDTAFLMEQLELREEL
DEIEQAKSEARLESFIKRVKKMFDTRHQLMVEQLDNETWDAAADTVRKLRFLDKLRSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IASMIKDSMSYAEQDVKARMLAEQKVEAARVLESLHGALAADAALLSAAERQVIDDAA
AHLSEVAQGDDVDAIEQAIKNVDKQTQDFAARRMDQSVRRALKGHSVDEV"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               complement(5842. .6165)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /gene="ECs3394"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /product="molecular chaperone"
/protein_id="BAB36816.1"
/db_xref="GI:13362864"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   transl_table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            note="similar to ISCU_ECOLI gi|7387937|sp|P77310 percent dentity 100 in 128 aa (Conserved in E.coli K-12)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEPTPEDIVFEDKGVKVVVDGKSLQFLDGTQLDFVKEGLNEGFKFTNPNVKDECGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ′gene≖"ECs3394"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   'transl_table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100 in 171 aa (Conserved
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note="similar to HSCB_ECOLI gi|1788876 percent
100 in 171 aa (Conserved in E.coli K-12)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               product="putative iron-binding protein"
protein_id="BAB36817.1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          codon_start=1
transl_table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            evidence=not_experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            codon_start=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            translation="MSITLSDSAAARVNTFLANRGKGFGLRLGVRTSGCSGMAYVLEF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ote="similar to ISCA_ECOLI gi|1788877 percent 10 in 107 aa (Conserved in E.coli K-12)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                               89.50
35.09%
27.19%
13.40%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1.11e+03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        _xref="GI:13362865"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EEKLLDF"
                                                                                                                                                                                                                                                                                                                                      -----ArgAlaMetAlaProArgGlyCysIle 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .5746)
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches:
Indels:
-GTACATTCAGCCCTGCGCCGC 187105
                                                                                                                                                                                                                                                                                                                                                                                                                                        270365
31
9
39
35
                                                                                                                                             ----Туг
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       identity
                                                                                                                                             40
                                                                                             187066
                                                                                                                                                                                           187006
```

밁 S 밁 Ş 밁 Ş В Ş

```
Дb
                                      Ş
                                                                        В
                                                                                                         Ş
                                                                                                                                      US-09-092-297-17 (1-117) x AC073761 (1-206850)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                     BASE COUNT
ORIGIN
                                                                                                                                                                                               Query Match:
                                                                                                                                                                                                                                                                    Pred. No.:
                                                                                                                                                                                                                                                                                   Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                  Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Db 187166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AC073761/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Snoor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                      23
                                                                                                           ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 CysCysTyrAspAspAlaValValProLeuAlaArgThrGlnThr---
                                                                        AAACCACCA-----
                                                                                         GlnProProArgAlaMetAlaProArgGlyCysIleValAlaValPheAlaIlePheCys
                                  IleSerArgLeuLeuCysSerHisGlyAla-ProValAlaProMetThrProTyrLeuMe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGGTTTTGCAACCAATGCAACGTTCCTGCATCACATGAACAA 187207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGTTGCGAATCACCGGACGTACCACCACTTCCATCGCGCCATACGGGCAAGCCACAACGC 187165
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Quality: Phrap Quality >-40 99.7% of Sequence; Estimated Total Number of Errors is 0.9.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Submitted (18-DEC-2001) DOE Joint Genome Institute, 2800 Mitchell Drive, Walnut Creek, CA 94598, USA On Dec 18, 2001 this sequence version replaced gi:15808521.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Submitted (29-SEP-2001) DOE Joint Genome Institute, 2 Drive, Walnut Creek, CA 94598, USA 4 (bases 1 to 206850) DOE Joint Genome Institute and Stanford Human Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Submitted (29-JUN-2000) Production Sequencing Facility, DOE Joint Genome Institute, 2800 Mitchell Drive, Walnut Creek, CA 94598, USA 3 (bases 1 to 206850) DOE Joint Genome Institute and Stanford Human Genome Center.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             www-shgc.stanford.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Finishing Completed at Stanford Human Genome Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 www.jgi.doe.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 (bases 1 to 206850)
DOE Joint Genome Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mus musculus
AC073761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 (bases 1 to 206850)

DOE Joint Genome Institute and Stanford Human Genome Center.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalla; Eutherla; Rodentla; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               nouse mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AC073761.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AC073761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -CysGlyAsnCysThrPheArgValCysPheGluGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence Produced by DOE Joint Genome Institute
                                                                                                                                                                                                                                                                                                                                      ø
                                                                                                                                                                                                                                                                                                                                  /clone="RP23-33K21"
56307 c 54095 g
                                                                                                                                                                                                                                                                                                                                                                      /db_xref="taxon:10090"
/chromosome="17"
CTTTGTGGCTCTGGAAGTGTCCCTTTGCCCTTGCTGTGCTTGACTTAA 206562
                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                           941
89.00
41.27%
30.16%
13.32%
                                                                                                                                                                                                                                                                                                                                                                                                                             . 206850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GI:17921212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               chromosome
                                                                   -CCCAAGGGCTGC-----TGCACCTATTTCCCGCTGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               206850 bp
ne 17 clone
                                                                                                                                                                                           Conservative: Mismatches: Indels:
                                                                                                                                                                         Gaps:
                                                                                                                                                                                                                                              Length:
Matches:
                                                                                                                                                                                                                                                                                                                                      47131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA 1:
RP23-33K21,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Institute, 2800 Mitchell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       87
                                                                                                                                                                         206850
38
14
49
25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            complete sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ROD 18-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Center
                                  42
                                                                     206610
```

Result No.

Score

Description

```
Command line parameters:

MODEL-frame+_p2n.model -DEV=xlh

-Q-/cgn2_1/USPTO_spool/US09092297/runat_29102002_093920_21656/app_guery.fasta_1.263
-DB-N_Geneseq_032802 -QFMT=fastap -SUFFIX*p2n.rng -MINMATCH=0.1 -LOOPCL=0
-LOOPEXT=0 -UNITS-bits -START=1 -END=-1 -MATRIX*-blosum62 -TRANS-human40.cdi
-LIST-45 -DOCALIGN=200 -THR_SCORE-pct -THR_MAX=100 -THR_MIN=0 -ALIGN=15
-MODE*LOCAL -OUTFMT=pto -NORM-ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=2000000000
-USER-US09092297_eCGN_1_1_0_erunat_29102002_093920_21656 -NCPU=6 -LOPU=3
-NO_XLPXY -NO_MMAP -LARGEQUERY -NEG_SCORES=0 -WAIT -LONGLOG -DEV_TIMEOUT=120
-WARN_TIMEOUT=30 -THRRADS=1 -XGAPOP=10 -XGAPEXT=0.5 -FGAPOP=6 -FGAPEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OM protein - nucleic search, using frame_plus_p2n model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -YGAPEXT-0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Xgapop 10.0,
Ygapop 10.0,
Fgapop 6.0,
Delop 6.0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N_Geneseq_032802:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-092-297-17
668
is SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1981.DAT:*
SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1984.DAT:*
SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1985.DAT:*
SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1985.DAT:*
SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1985.DAT:*
SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1986.DAT:*
SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1989.DAT:*
SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1989.DAT:*
SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1990.DAT:*
SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1991.DAT:*
SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2000.DAT:*
SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2000.DAT:*
SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2000.DAT:*
SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2000.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1736436 seqs, 858457221 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    November 3,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PLQPPRAMAPRGCIVAVFAI...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GenCore version 5.1.3
Copyright (c) 1993 - 2002 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1980.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1981.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1982.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -DELOP-6 -DELEXT-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2002, 01:08:01; Search time 210 Seconds (without alignments) 956.567 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Xgapext
Ygapext
Fgapext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       . . . . . .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .....INQNCDSARTSDDRLCRSVS 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3472872
```

AAI50488 ABA57723

Human bone marrow Probe #19174 used Human foetal liver Human brain expres

Human brain expres

AAK05787

AAK44496

AAK18578

186 186

207.5 200 191.5 191.5 191.5 191.5

215 207.5 207.5 207.5 207.5

DNA encoding novel
DNA encoding novel
Human secreted exp
Human PRO1275 (UNO
Human cDNA sequenc

Human DNA encoding Human PRO982 cDNA. Human PRO982 cDNA. Human AFP protein

DNA encoding novel Human PRO982 prote Urinary tract tiss

DNA encoding prote Human secreted pro DNA encoding novel Human foetal liver

Pred. No. is the number of results predicted by chance to have score greater than or equal to the score of the result being predicted by analysis of the total score distribution. printed,

28-OCT-1999 DE19818619-A1

## Query Match 1100.0 100.0 10 Length 1338 1338 662 662 멂 Ä AAF5429 AAS7090: SUMMARIES

Native sequence of DNA encoding prote Human bladder spec

Human cDNA sequenc Human PRO1274 cDNA Human PRO1274 (UNQ Urinary tract Human bladder

Human signal pept:

## ALIGNMENTS

0000000

159.5 159.5 159.5

AAS69642

Human bone marrow Probe #5989 used t DNA encoding novel DNA encoding novel DNA encoding novel DNA encoding novel

DNA encoding novel Human breast cell Human foetal liver Probe #3597 for ge Human brain expres Human bone marrow Probe #3627 for ge Probe #3738 used t

```
RESULT 1
AAZ24391
ID AAZ2
XX
AC AAZ2
XX
DT 14-F
XX
DE Huma
XX
KW Expr
KW trea
XX
OS Homc
XX
PD DE19
XX
DE19
XX
                                                                    Expressed sequence tag; human; bladder; tumour; cancer; cytostatic; treatment; gene-therapy; EST; ss.
                                              Homo sapiens.
                                                                                                         Human bladder tumour cDNA library derived EST 3.
                                                                                                                                    14-FEB-2000
                                                                                                                                                             AAZ24391;
                                                                                                                                                                                     AAZ24391 standard; cDNA; 762
                                                                                                                                   (first entry)
```

```
RESULT 2
AAX01686
                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                  망
                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                           뭥
                                                                                                                                                                                                                                                                                                                                                                                 ş
                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                 B
                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-092-297-17 (1-117) x AAZ24391 (1-762)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            This invention describes novel polypeptide fragments (I) and the CC polynucleotides (II) that encode them that are highly expressed in a CC human bladder tumour and which have cytostatic activity. (II) are used CC directive treat this form of (I) and to isolate complete genes. (I) are CC used to identify agents suitable for treatment of bladder cancer, to CC directly treat this form of cancer (including expression from gene CC therapy vectors) or are used in a preparation for cancer treatment. (I) CC is also used for the generation of specific antibodies. (II) are CC identified by assembling ESTs (expressed sequence tags) from a CC particular tissue type before comparison of expression patterns. This CC allows a significantly longer fragment of the gene to be revealed, and CC therefore reduces the number of failures associated with the fact that CC ESTs from different libraries may represent different parts of the same CC unknown gene, distorting the estimated frequency of occurrence in a CC fragments isolated from a human bladder tumour CDNA library which encode the anxiety is anxiety of the same content in the content of the courtence in a content of the content is solated from a human bladder tumour CDNA library which encode the anxiety is anxiety of the content of the con
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New nucleic acid sequences expressed in bladder tumor tissue, and derived polypeptides, for treatment of bladder tumor and identification of therapeutic agents
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 762 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 3; Page 62; 132pp; German
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI;
                                                                    303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21-APR-1998;
                                                                                                              101
                                                                                                                                                           243
                                                                                                                                                                                                                                                    183
                                                                                                                                                                                                                                                                                                                                           123
                                                                                                                                                                                                     81
                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                   41
                                                                                                                                                                                                                                                                                                                                                                                                                                63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             proteins represented in AAY66143-Y66198.
                                                             CysCysTyrAspAspAlaValValProLeuAlaArgThrGlnThrCysGlyAsnCysThr
                                                                                                                                                                                                                                                                                                                                                           LeuMetLeuCysGlnProHisLysArgCysGlyAspLysPheTyrAspProLeuGlnHis
                                                                                                                                                                                                                                                                                                                                                                                                                                                PheCysIleSerArgLeuLeuCysSerHisGlyAlaProValAlaProMetThrProTyr 40
                                                                                                                                                 TTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCTGATAAACCAG
                                                                                                                                                                             PheArgValCysPheGluGlnCysCysProTrpThrPheMetValLysLeuIleAsnGln 100
                                                                                                                                                                                                                                                                                                                                                                                                                           TTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCCAGTGGCCCCCATGACTCCTTAC
                                                                                                                                                                                                                                             TGTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCAGACGTGTGGAAACTGCACC
                                                                                                                                                                                                                                                                                                                                    CTGATGCTGTGCCAGCCACACAAGAGATGTGGGGGACAAGTTCTACGACCCCCTGCAGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1999-612028/53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Specht T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          98DE-1018619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98DE-1018619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GES GENOMFORSCHUNG MBH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        162 A; 232 C; 194 G; 174 T; 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1.5e-64
668.00
100.00%
100.00%
100.00%
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hinzmann B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Schmitt A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      762
117
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pilarsky C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Dahl E;
                                                                                                                                                                                                                                             242
                                                                                                                                                                                                                                                                                                                                                                              60
                                                                                                                                                      302
                                                                                                                                                                                                                                                                                          80
                                                                                                                                                                                                                                                                                                                                  182
                                                                                                                                                                                                                                                                                                                                                                                                                         122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    62
```

оу оу оу оу оу

3 21 63 41 41

PheCysIleSerArgLeuLeuCysSerHisGlyAlaProValAlaProMetThrProTyr

40

TTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCCAGTGGCCCCCATGACTCCTTAC

ProLeuGlnProProArgAlaMetAlaProArgGlyCysIleValAlaValPheAlaIle

CCACTGCAACCACCCAGAGCCATGGCTCCCCGAGGCTGCATCGTAGCTGTCTTTGCCATT

```
THE TEXT OF STATE OF 
US-09-092-297-17 (1-117) x AAX01686
                                                                                                          Query Match:
                                                                                                                                                 Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                        Pred. No.:
                                                                                                                                                                                                                                                                                          Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PF XXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                       This represents a full-length sequence of a clone specific for urinary tract tissue library BL172. The BL172 polynucleotides (AAX01683-87) are used to detect target BL172 polynucleotides and BL172 mRNA and the BL172 polypeptides are used to detect BL172 artigens/antibodies in a test sample. The identification of certain markers in these methods are indicative of the presence of urinary tract disease, especially cancer. Additionally, the polypeptides are used to detect antibodies that bind specifically to a BL172 epitope derived from a BL172 polypeptide. Host cells containing a recombinant expression vector comprising the BL172 polynucleotide sequences are used to produce the polypeptides containing BL172 epitopes. The methods aid in diagnosis, detection, staging, monitoring, prognostication, in vivo imaging, prevention and treatment of diseases or conditions associated with BL172, especially urinary
                                                                                                                                                                                                                                                                                                                                                                      Sequence 763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 1; Page 89-90; 114pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New purified polynucleotide BL172 derivatives and encode polypeptides - useful in the identification of markers, indicative of urinary tract diseases or conditions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 1999-045802/04.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Roberts-Rapp L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Billing-medel PA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (ABBO ) ABBOTT LAB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              05-JUN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   05-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO9855656-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BL172; urinary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAX01686 standard; DNA; 763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Granadosen,
                                                                                                                                                                                                                                                                                                                                                                      B₽;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tissue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tract; marker;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              97US-0869579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98WO-US11693

    Cohen M, Colpitts TL, Friedman PN;
    adosen, Hodges SC, Klass MR, Kratochvil JD;
    Russell JC, Stroupe SD, Yu H;

                                                                                                                                                                                                                                                                                                                                                                   162 A; 231 C;
                                                                        668.00
100.00%
100.00%
100.00%
20
                                                                                                                                                                                                                                                    1.5e-64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  library BL172 gene full length clone 1554838IH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ВР
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cancer;
(1-763)
                                                                                                                                                                                                                                                                                                                                                                   195 G;
                                                                                                                                                                           Length:
Matches:
Conservative:
                                                                                               Indels:
                                                                                                                                                 Mismatches:
                                                                                                                                                                                                                                                                                                                                                                   175 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             recombinant;
                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 which
```

```
RESULT 3
AAXO1687
ID AAXO
XX AAXC
XX AAXC
XX AAXC
XX AAXC
XX UIII
XX BL1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q
                                                                 This represents a consensus sequence of a clone specific for urinary tract tissue library BL172. The BL172 polynucleotides (AAX01683-87) are used to detect target BL172 polynucleotides and BL172 mRNA and the BL172 polypeptides are used to detect BL172 antigens/antibodies in a test sample. The identification of certain markers in these methods are indicative of the presence of urinary tract disease, especially cancer. Additionally, the polypeptides are used to detect antibodies that bind specifically to a BL172 epitope derived from a BL172 polypeptide. Host cells containing a recombinant expression vector comprising the BL172 polypucleotide sequences are used to produce the polypeptides containing BL172 epitopes. The methods aid in diagnosis, detection, staging, monitoring, prognostication, in vivo imaging, prevention and treatment of diseases or conditions associated with BL172, especially urinary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BL172; urinary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Urinary tract tissue library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAX01687;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAX01687 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                05-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO9855656-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New purified polynucleotide BL172 derivatives and encoded polypeptides - useful in the identification of markers, windicative of urinary tract diseases or conditions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Billing-medel PA,
Gordon J, Granad
                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 1; Page 90; 114pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Roberts-Rapp L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (ABBO ) ABBOTT LAB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              05-JUN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PheArgValCysPheGluGlnCysCysProTrpThrPheMetValLysLeuIleAsnGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1999-045802/04.
DB; AAW92252.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Granadosen,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tract;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              97US-0869579.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98WO-US11693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers 3..356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /*tag= a
/product= "BL172 polypeptide"
/note= "the start codon is not indicated"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Russell JC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cohen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        marker;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hodges
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ž
                                                                                                                                                                                                                                                                                                                                                                                                                                 English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ¥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BL172 gene consensus sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Colpitts TL, es SC, Klass
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cancer; recombinant; human; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Stroupe SD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Yu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Friedman PN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Η;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Kratochvil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               which
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       80
```

Alignment Scores:

Sequence

763

₿₽;

162

Α,

231 C;

194 G;

175

T; 1 other;

```
Best Local Similarity:
Query Match:
  PR 115
PR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-092-297-17 (T-117) x AAX01687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
20-JUL-1999;
26-JUL-1999;
01-SEP-1999;
08-SEP-1999;
13-SEP-1999;
15-SEP-1999;
15-SEP-1999;
05-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human; PRO; promotion; inhibition; angiogenesis; cardiovascularisation; diagnosis; trauma; wound; cancer; atherosclerosis; cardiac hypertrophy; angiogenic; proliferative; cardiant; cardiovascular; antiatherosclerotic; cytostatic; gene therapy; vaccine; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human PRO1274 cDNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  07-NOV-2000
                                                                                                                                                                                                                                                                                                                                 01-DEC-1998;
16-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                          08-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAA77668;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAA77668 standard; cDNA;
                                                                                                                                                                                                    14-MAY-1999
02-JUN-1999
                                                                                                                                                                                                                                             28-APR-1999
                                                                                                                                                                                                                                                                                        08-MAR-1999
                                                                                                                                                                                                                                                                                                                                                                                                   30-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO200032221-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             123
                                                                                                                                                                                                                                                                   12-MAR-1999
                                                                                                                                                                                                                                                                                                             12-JAN-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ۳
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PheArgValCysPheGluGlnCysCysProTrpThrPheMetValLysLeuIleAsnGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CysCysTyrAspAspAlaValValProLeuAlaArgThrGlnThrCysGlyAsnCysThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LeuMetLeuCysGlnProHisLysArgCysGlyAspLysPheTyrAspProLeuGlnHis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCTGATAAACCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCAGACGTGTGGAAACTGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AsnCysAspSerAlaArgThrSerAspAspArgLeuCysArgSerValSer 117
                      99WO-US20111.
99WO-US20594.
99WO-US20944.
99WO-US21090.
99WO-US21547.
                                                                                                                                                                             99US-0131445.
99US-0134287.
99WO-US12252.
99US-0141037.
                                                                                                                                                                                                                                                                                                                                                                                                     99WO-US28313
                                                                                                                                    99US-0144758
99US-0145698
                                                                                                                                                                                                                                                                                                                                                        98WO-US25108
                                                                                                                                                                                                                                                                      99WO-US05028
99US-0123957
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1.5e-64
668.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO:196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (1-763)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             242
```

29-OCT-1999;

```
US-09-092-297-17 (1-117) x AAA77668 (1-771)
                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The present invention describes nucleic acids encoding PRO polypeptides CC useful for preventing, diagnosing and treating diagnosing a cc cardiovascular, endothelial or angiogenic disorder in mammals by CC modulating cell proliferation, angiogenesis and cardiovascularisation, CC uncleic acids and the proteins they encode may be used in the CC prevention, treatment and diagnosis of diseases associated with CC inappropriate PRO expression such as cardiovascular, endothelial or CC cardiac hypertrophy). For example, the nucleic acids (NCs) and vectors associated with decreased PRO expression. AAA77510 to AAA77721 and CC catalada to AAB24435 represent nucleotide and protein sequences used in XXX the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores:
                         AAA37062;
                                        AAA37062 standard; cDNA; 771
                                                                                            303
                                                                                                                  101
                                                                                                                                          243
                                                                                                                                                                                       183
                                                                                                                                                                                                                                   123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 771 BP;
                                                                                                                                                                18
                                                                                                                                                                                                                            41 LeuMetLeuCysGlnProHisLysArgCysGlyAspLysPheTyrAspProLeuGlnHis
                                                                                                                                                                                                                                                                                                                                                                                                                                                      No.:
                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                              63
                                                                                                                                                                                                                                                                                                     21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 61; Fig 75; 315pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Nucleic acids encoding PRO polypeptides useful for preventing, diagnosing and treating diagnosing a cardiovascular, endothelial or angiogenic disorders in mammals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2000-412154/35.
P-PSDB; AAB24425.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ashkenazi AJ, Baker KP, I
Godowski PJ, Gurney AL, I
Watanabe CK, Williams PM,
                                                                                                                                                                                                                                                                                                                            ω
                                                                            AACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGC
                                                                                      AsnCysAspSerAlaArgThrSerAspAspArgLeuCysArgSerValSer 117
                                                                                                                                 - CysCysTyTAspAspAlaValValProLeuAlaArgThrGlnThrCysGlyAsnCysThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ashkenazi AJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (GETH ) GENENTECH INC.
                                                                                                                      TTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCTGATAAACCAG
                                                                                                                                                                  TGTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCAGGACGTGTGGAAACTGCACC
                                                                                                                                                                                                               CTGATGCTGTGCCAGCACACAAGAGATGTGGGGACAAGTTCTACGACCCCCTGCAGCAC
                                                                                                                                                                                                                                                                     PheCys1leSerArgLeuLeuCysSerH1sG1yA1aProVa1A1aProMetThrProTyr
                                                                                                                                                                                                                                                                                                       TTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCATGACTCCTTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         169 A; 231 C; 195 G; 176 T; 0
                                                                                                                                                                                                                                                                                                                                                                                      1.52e-64
668.00
100.00%
100.00%
100.00%
21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99US-0162506
                                        BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ferrara N,
Klein RD,
, Wood WI;
                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                    Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gerber H, Hillan KJ, Goddard Kuo SS, Paoni NF, Smith V;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        other;
                                                                                                                                                                                                                                                                                                                                                                              771
117
0
0
0
                                                                             353
                                                                                                                                             100
                                                                                                                      302
                                                                                                                                                                    242
                                                                                                                                                                                         80
                                                                                                                                                                                                                182
                                                                                                                                                                                                                                     60
                                                                                                                                                                                                                                                                                40
                                                                                                                                                                                                                                                           122
                                                                                                                                                                                                                                                                                                       62
                                                                                                                                                                                                                                                                                                                              20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A
29-SEP-1998;
29-SEP-1998;
                                                                                       24-SEP-1998
                                                                                                              23-SEP-1998
                                                                                                                       23-SEP-1998
23-SEP-1998
                                                                                                                                               23-SEP-1998
                                                                                                                                                                                                                           18-SEP-1998
18-SEP-1998
18-SEP-1998
                                                                                                                                                                                                     18-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                        10-SEP-1998;
10-SEP-1998;
10-SEP-1998;
10-SEP-1998;
10-SEP-1998;
                                                                                                                                                                                                                                                                                                           7-SEP-199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-SEP-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             09-MAR-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; PRO polypeptide; membrane bound protein; receptor; diagnosis;
transmembrane; secretion; immunoadhesion; pharmaceutical; screening;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human PRO1274 (UNQ644) cDNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      08-AUG-2000
                       98US-0101475
98US-0101476
98US-0101477
98US-0101479
98US-0101738
98US-0101741
98US-0101743
98US-0101743
98US-0101743
98US-0101743
                                                                                                                                                  98US-0100848
98US-0100849
98US-0101014
98US-0101068
98US-0101071
98US-0101279
98US-0101471
98US-0101471
98US-0101474
                                                                                                                                                                                                                                                                                      98US-0100683.
98US-0100684.
98US-0100710.
                                                                                                                                                                                                                                                                                                                                      98US-0100627
98US-0100661
98US-0100662
                                                                                                                                                                                                                                                                                                                                                                        98US-0100385.
98US-0100388.
98US-0100390.
98US-0100584.
                                                                                                                                                                                                                                                                                                                                                                                                                               98US-0099792.
98US-0099808.
98US-0099812.
98US-0099815.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                     98US-0100919
                                                                                                                                                                                                                                                                               98US-01007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9805-0099763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9805-0099598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98US-0099536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9805-009884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98US-0098750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99WO-US20111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQ ID NO:137
```

S X B

문 δÃ 밁 Q 밁 Ş 밁 δÃ Ъ Ş 밁 Ş

```
03-NOV-1998
17-NOV-1998
18-NOV-1998
18-NOV-1998
18-NOV-1998
18-NOV-1998
                                                                                                                                                                                                                     30-SEP-1998

30-SEP-1998

30-SEP-1998

01-SEP-1998

01-CCT-1998

06-CCT-1998

07-CCT-1998

07-CCT-1998

07-CCT-1998

07-CCT-1998

07-CCT-1998

07-CCT-1998

08-CCT-1998

20-CCT-1998

21-CCT-1998

22-CCT-1998

23-CCT-1998

24-CCT-1998

25-CCT-1998

26-CCT-1998

27-CCT-1998

28-CCT-1998

28-CCT-1998

28-CCT-1998

29-CCT-1998

29-CCT-1998
                                                           18-NOV-1998;
18-NOV-1998;
18-NOV-1998;
   WPI; 2000-237871/20.
P-PSDB; AAY99380.
                          Goddard A,
                                                          98US-0108787
98US-0108801
98US-0108801
98US-0108807
98US-0108867
98US-0108867
98US-0108867
98US-0108867
98US-0108849
98US-0108851
98US-0108851
98US-0108851
98US-0108851
                                                                                                                                                                                                                                            98US-0102484

98US-0102570

98US-0102570

98US-0102570

98US-0102687

98US-0103258

98US-0103344

98US-0103345

98US-0103325

98US-0103325

98US-0103325

98US-0103325

98US-0103677

98US-0103677

98US-0103677

98US-010500

98US-010500

98US-010500

98US-0105500

98US-0105500

98US-0105500

98US-0105503

98US-0105693

98US-0105693

98US-0105693

98US-0105882

98US-0105882

98US-0105882

98US-0105883

98US-010583

98US-010583

98US-010583

98US-010583

98US-010583

98US-010583

98US-010583

98US-010583

98US-0105882

98US-0105882

98US-0105882

98US-0105883

98US-0105883

98US-0105884

98US-0105884

98US-0106856

98US-0106856

98US-0106856
                                                                                                                                                                                    98US-01
98US-01
98US-01
98US-01
                                                                                                                                                                                                                      -S086
-S086
-S086
                          Gurney
                          AL,
                          Smith
                          <
                          Watanabe CK,
                          Wood WI;
RESULT 6
AAS21491
ID AAS2
XX AAS2
XX AAS2
XX Huma
XX Huma
XX Huma
XX Huma
XX Homo
                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                          맑
                                                                                                                                                                                         Ωy
                                                                                                                                                                                                           밁
                                                                                                                                                                                                                        Ωy
                                                                                                                                                                                                                                           망
                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                            胺
                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                          γQ
                                                                                                                                                                                                                                                                                                                                                                             US-09-092-297-17
                                                                                                                                                                                                                                                                                                                                                                                                                             Alignment Scores: Pred. No.: Score:
               WO200140466-A2
                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim
                                                                                                                                                                          303
                                                                                                                                                                                                           243
                                                                                                                                                                                           101
                                                                                                                                                                                                                                            183
                                                                                                                                                                                                                                                                            123
                                                                                                                                                                                                                           81
                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                           41
                                                                                                                                                                                                                                                                                                            63
                                                                                                                                                                                                                                                                                                                            21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Fig
                                                                                                                                                                                                                                                                                                                                                                                                                                                              ВP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                81;
```

```
Human secretory and transmembrane; PRO; mammalian; cancer; lung; breast; prostate; cervical; tumour necrosis factor-alpha; TNF-alpha; cartilage; ear; proliferation; glucose; free fatty acid; skeletal mu adipocyte; A-peptide; factor VIIA; gene therapy; ss.
                                                                                                                 Human cDNA sequence encoding
                                                                                                                                                        24-OCT-2001 (first entry)
                                                                                                                                                                                                                                                     AAS21491 standard; cDNA; 771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAA37022 to AAA37144 encode the new isolated human transmembrane, receptor or secreted PRO polypeptides given in AAY99340 to AAY99462. The transmembrane and receptor PRO proteins can be used for screening of potential peptide or small molecule inhibitors of the relevant receptor/ligand interactions. The polypeptides and nucleotide sequences encoding then have various industrial applications, including uses as pharmaceutical and diagnostic agents. AAA37145 to AAA3730 represent PCR primers and hybridisation probes used in the isolation of the PRO polypeptides from the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New mammalian DNA sequences encoding transmembrane, receptor or secreted PRO polypeptides, useful for screening of potential peptide or small molecule inhibitors of the relevant receptor/ligand interactions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CysCysTyrAspAspAlaValValProLeuAlaArgThrGlnThrCysGlyAsnCysThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LeuMetLeuCysGlnProHisLysArgCysGlyAspLysPheTyrAspProLeuGlnHis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTGATGCTGTGCCAGCCACACAGAGATGTGGGGGACAAGTTCTACGACCCCCTGCAGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PheCys I leSerArgLeuLeuCysSerHisGlyAlaProValAlaProMetThrProTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCATGACTCCTTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (1-117) x AAA37062 (1-771)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             169 A; 231 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            773pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1.52e-64
668.00
100.00%
100.00%
100.00%
21
                                                                                                                                                                                                                                                     ВP
                                                                                                                 for PR01274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             195 G; 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                               polypeptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Η,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             other;
                         muscle;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The
```

```
AAS21244-AAS21518 encode for novel human secretory and transmembrane CC PRO polypeptides. The PRO polypeptides are useful to detect other CC PRO polypeptides, to link bloactive molecules to cells expressing CC PRO polypeptides, to modulate biological activities of cells expressing CC PRO polypeptides, and to detect the presence of mammalian lung, colon, CC breast, prostate, rectal, cervical or liver tumours by comparing PRO CC polypeptide expression in a cell sample to that in a control sample. CC some of the 275 sequences are also useful to stimulate the release of tumour necrosis factor-alpha (TNF-alpha) from human blood, the CC proliferation or differentiation of chondrocytes, the proliferation or gene expression in pericyte cells, the release of proteoglycans from cartiage, the proliferation of inner ear utricular supporting cells or factor-lymphocytes, the release of a cytokine from peripheral blood confocytes (PBMCs), or the proliferation of endothalial cells. Some of the PRO polypeptides may modulate glucose or free fatty acid uptake by the proliferation of the order than the proliferation of the proliferation of endothalial cells. Some of confocytes (PBMCs), or the proliferation. The polynucleotides encoding the proliferation of inserting to identify provides involved in binding interactions. The polynucleotides encoding transgenic or knock out animals and can be used in gene therapy.
                                                                                                                                                                                                                                                                                                                                                                          Claim 3; Fig 495; 813pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                         Isolated, secretory and transmembrane PRO polypeptide used to detect other PRO polypeptides, link bioactive molecules to cells expressing PRO polypeptides, and detect the presence of mammalian tumours e.g. lung, breast, prostate, cervical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gerritsen ME, Goddar
Smith V, Stewart TA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Baker
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (GETH )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 30-MAR-2000;
17-MAY-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    22-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                24-FEB-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  06-JAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-DEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-DEC-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    H33-81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2001-408281/43.
DB; AAU12419.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ΚP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENENTECH INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Beresini M,
Æ, Goddard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000WO-US00277
2000WO-US00376
2000WO-US03565
2000WO-US04341
2000WO-US04341
2000WO-US04414
2000WO-US04914
2000WO-US05004
2000WO-US05601
2000WO-US07377
2000WO-US07377
2000WO-US07377
2000WO-US07377
2000WO-US07377
2000WO-US07377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000WO-US32678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99WS-0170262.
99WO-US30095.
99WO-US30911.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99WO-US30999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99WO-US28565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Α,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tumas D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Deforge L, Desnoyers L, Filvai
A, Godowski PJ, Gurney AL, Sha
Tumas D, Watanabe CK, Wood WI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Filvaroff E,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sherwood S; VI, Zhang Z;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Σ
```

Pred. No.: Alignment Scores:

1.52e-64 668.00

WO200140465-A2

BP;

169 A; 231 C;

195 ü 176 T; 0 other;

```
KW PRO199; PRO1081; PRO1274; PRO10272; proliferation; T-lymphocyte;
KW PRO1199; PRO1556; PRO4401; PRO10268; Inhibition; stimulation;
KW infiltration; mononclear cell; eosinophil; erythema multiforme;
KW infiltration; mononclear cell; eosinophil; erythema multiforme;
KW polymorphonuclear neutrophil; PMN; antibody; immune-related disorder;
KW systemic lupus erythematosus; rheumatoid arthritis; osteoarthritis;
W ivenile chronic arthritis; spondyloarthropathy; systemic sclerosis;
KW idiopathic inflammatory myopathy; Sjogren's syndrome; skin disease;
KW systemic vasculitis; sarcoidosis; autoimmune haemolytic anaemia; asthma;
KW systemic vasculitis; sarcoidosis; autoimmune haemolytic anaemia; asthma;
KW unmune-mediated renal disease; demyelination; central nervous system;
KW immune-mediated renal disease; demyelinating; central nervous system;
KW peripheral nervous system; idiopathic demyelinating polyneuropathy;
KW dufilain-Barre syndrome; hepatobiliary disease; eosinophilic pneumonia;
KW drienic active hepatitis; primary biliary cirrhosis; allergic rhintitis;
KW drienic active hepatitis; sclerosing cholangitis; food hypersensitivity;
KW drienic disease; idiopathic pulmonary fibrosis; contact dermatitis;
KW poriasis; atopic dermatitis; hypersensitivity pneumonitis;
KW graft reflection; oraft-versus-next disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAC85962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-092-297-17 (1-117) x AAS21491
                                                                                                                        Key
CDS
                                                    mat_peptide
                                                                                  sig_peptide
                                                                                                                                                                     Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Native sequence of PRO1274 cDNA, clone DNA64889-1541.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAC85962 standard; cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAC85962;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AsnCysAspSerAlaArgThrSerAspAspArgLeuCysArgSerValSer 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PheArgValCysPheGluGlnCysCysProTrpThrPheMetValLysLeuIleAsnGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCACTGCAACCACCCAGAGCCATGGCTCCCCGAGGCTGCATCGTAGCTGTCTTTGCCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ProLeuGlnProProArgAlaMetAlaProArgGlyCysIleValAlaValPheAlaIle
                                                                                                                                                                                          rejection; graft-versus-host disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCTGATAAACCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                     /product=
24..95
/*tag= b
96..353
/*tag= c
                                                                                                                                       Location/Qualifiers
                                                                                                             /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100
                                                                                                            ۵
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .00%
                                                                                          "PRO1274 polypeptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (1-771)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0000
                                                                                                                                                                                                                                                                                                                                        asthma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20
```

밁 ρ 밁 Q 밁 Š 밁

맑 QY

```
CC myopathy, Sigren's syndrome, systemic vasculitis, sarcollosis, cc autoimmune haemolytic anaemia, autoimmune thrombocytopaenia, thyroiditis, cc disease mellitus, immune-mediated renal disease, a demyelinating cc disease of the central or peripheral nervous system, idiopathic cc demyelinating polyneuropathy. Guillain-Barre syndrome, a chronic cc infectious or autoimmune chronic active hepatitis, primary biliary cc irrhosis, granulomatous hepatitis, sclerosing cholangitis, cc disease, an autoimmune or immune-mediated skin disease, abullous skin cd disease, arthma, allergic ninitis, atopic dermatitis, food chypersensitivity, urticaria, an immunologic disease of the lung, consonitis, a transplantation associated disease, graft rejection or consonities, a transplantation associated disease, graft rejection or consonities.
              Ş
                                             밁
                                                                        ő
                                                                                                         US-09-092-297-17 (1-117) x AAC85962 (1-771)
                                                                                                                                                                      Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11-JAN-2000;
20-JAN-2000;
18-FEB-2000;
03-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mononuclear cells, eosinophils or polymorphonuclear neutrophils (PMN) into the tissue of a mammal. The PRO CDNA's and antibodies which bind to them, are used to treat an immune-related disorder in a mammal. Such disorders include systemic lupus erythematosus, rheumatoid arthritis, osteoarthritis, juvenile chronic arthritis, a spondy loarthropathy, systemic sclerosis, an idipathic inflammatory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     09-DEC-1999;
23-DEC-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   07-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Fong
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The sequences given in AAC85961-69 encode PRO polypeptides. PRO1081, PRO1274 and PRO10272 stimulate the proliferation of T-lymphocytes and PRO1199, PRO1556, PRO4401 and PRO10268 inhibit the proliferation of T-lymphocytes. PRO1754 and PRO9912 act to enhance the infiltration of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30-MAY-2000;
05-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       disorder
                                                                                                                                                                                                                                                                 Sequence 771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Isolated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (GETH )
                                                                                                                                                        Match:
                                                                                                                                                                                                                     Мо
..
                21
                                              ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ß
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2001-381384/40.
)B; AAB47292.
PheCysIleSerArgLeuLeuCysSerHisGlyAlaProValAlaProMetThrProTyr
                                                                ProLeuGlnProProArgAlaMetAlaProArgGlyCysIleValAlaValPheAlaIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2; Fig
                                              CCACTGCAACCACCCAGAGCCATGGCTCCCCGAGGCTGCATCGTAGCTGTCTTTGCCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENENTECH INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRO polypeptide useful :
e.g. arthritis, asthma,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Goddard A, G
Watanabe CK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000US-0175481.
2000US-0177118.
2000US-US04342.
2000US-0187202.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3; 124pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000WO-US14941.
2000US-0209832.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000WO-US30873
                                                                                                                                                                                                                                                                   BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2000WO-US23328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99US-0172059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9908-0170262.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99WO-US28313
                                                                                                                                                                                                                                                                   169
                                                                                                                                           668.00
100.00%
100.00%
100.00%
22
                                                                                                                                                                                                                       1.52e-64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Godowski PJ,
K, Wood WI,
                                                                                                                                                                                                                                                                   A; 231
                                                                                                                                                                                                                                                                   Ç
                                                                                                                                                                                                                                                                    195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     for treat or diagnose an immune-related , allergy, diabetes or psoriasis -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Grimaldi CJ,
Zhang Z;
                                                                                                                                                        Conservative: Mismatches: Indels:
                                                                                                                                         Gaps:
                                                                                                                                                                                                     Matches:
                                                                                                                                                                                                                                                                   G
;
                                                                                                                                                                                                                                                                    176
                                                                                                                                                                                                                                                                                                        disease, graft rejection or
                                                                                                                                                                                                                                                                   Ŧ,
                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                    other;
                                                                                                                                           771
117
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gurney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ΑL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       thyroiditis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hillan
                      40
                                                  62
                                                                               20
```

```
RESULT 8
AAF54298
ID AAF5
XX AAF5
XX AAF5
XX DT 02-A
XX Secr
XX Secr
XX W020
XX Secr
XX Unid
PN W020
XX BPR 23-U
PR 23-U
PR 23-U
PR 23-U
PR 01-S
PR 02-B
PR 02-B
PR 02-B
PR 02-B
PR 02-B
PR 03-B
PR 03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23-JUN-1999;
20-JUL-1999;
26-JUL-1999;
01-SEP-1999;
29-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA encoding protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gao W,
Pan J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     02-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAF54298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAF54298 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Secreted; transmembrane; gene therapy; ss
                                                                                                                                                                                                                                                                                                     Secreted and transmembrane proteins and nucleic acids designated PRO, useful as hybridization probes, in chromosome and gene mapping and gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Baker
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18-FEB-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28-DEC-2000
                                                                                                                                                                                                                                    Claim 2;
                                                                                                                                                                                                                                                                                                                                                                              WPI; 2001-071395/08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 02-DEC-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                123
                                                                                                                                                                                                                                                                                                                                                                                                                          Watanabe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (GETH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CysCysTyrAspAspAlaValValProLeuAlaArgThrGlnThrCysGlyAsnCysThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LeuMetLeuCysGlnProHisLysArgCysGlyAspLysPheTyrAspProLeuGlnHis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCATGACTCCTTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCTGATAAACCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PheArgValCysPheGluGlnCysCysProTrpThrPheMetValLysLeuIleAsnGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AsnCysAspSerAlaArgThrSerAspAspArgLeuCysArgSerValSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCAGACGTGTGGAAACTGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ΚP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ) GENENTECH INC.
                                                                                                                                                                                                                                                                                                                                                                                                                          Goddard A, Godows)
Paoni NF, Roy MA,
be CK, Williams PM,
                                                                                                                                                                                                                                    Fig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Botstein D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99WO-US28313.
99WO-US28551.
99WO-US30095.
2000WO-US00219.
2000WO-US00376.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000WO-US04342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99US-0144758.
99US-0145698.
99WO-US20111.
99US-0162506.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99US-0141037
                                                                                                                                                                                                                                      787pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Godowski
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Desnoyers L,
                                                                                                                                                                                                                                         English.
                                                                                                                                                                                                                                                                                                                                                                                                                vioyers L, Baton DL, Ferrara N,
ti PJ, Grimaldi CJ, Gurney AL,
Smith V, Stewart TA, Tumas D;
Wood WI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         invention #41.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hillan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               <u>~</u>
```

The present invention relates to secreted and transmembrane proteins. These proteins and the DNA encoding them may be used as hybridization probes, in chromosome and gene mapping and in the generation of anti-sense RNA and DNA. They may also be used used to generate either transgenic animals or knockout animals which are in turn useful for development and screening of therapeutically useful reagents. The nucleic acids may also be used in gene therapy.

Sequence 771 BP;

169 A; 231 C;

195 G; 176 T; 0 other;

œ

```
RESULT 9
AAA08111
                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                 ş
                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                               ₽
                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                           õ
                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-092-297-17 (1-117) x AAF54298 (1-771)
A method has been developed for detecting, diagnosing metastasis, staging and monitoring the onset of metastasis or a change in stage of bladder cancer, by measuring bladder specific gene (BSG) levels j
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local s
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alignment
                                                   Detecting, diagnosing metastasis, treating bladder cancer, involves levels in cells or body fluids
                                          Claim 6;
                                                                                                      Salceda s,
                                                                                                                                    02-SEP-1998;
                                                                                                                                                  01-SEP-1999;
                                                                                                                                                                 09-MAR-2000.
                                                                                                                   (DIAD-) DIADEXUS LLC.
                                                                                                                                                                                                    Human; bladder specific gene; BSG; bladder cancer; diagnosis; detection; metastasis; cytostatic; ds.
                                                                                                                                                                               WO200012761-A1
                                                                                                                                                                                              Homo sapiens.
                                                                                                                                                                                                                                    Human bladder
                                                                                                                                                                                                                                                    22-JUN-2000
                                                                                                                                                                                                                                                                                 AAA08111 standard;
                                                                                                                                                                                                                                                                    AAA08111;
                                                                                                                                                                                                                                                                                                      243
                                                                                                                                                                                                                                                                                                                                                                              183
                                                                                                                                                                                                                                                                                                                                                                                                            123
                                                                                                                                                                                                                                                                                                                                                               81
                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                    2000-256658/22.
                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                          41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ب
                                                                                                                                                                                                                                                                                                                                   TTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCTGATAAACCAG
                                                                                                                                                                                                                                                                                                                                           TGTTGCTATGATGATGCCGTGGCCCTTGGCCAGGACGCAGACGTGTGGAAACTGCACC
                                                                                                                                                                                                                                                                                                                                                                                                        CTGATGCTGTGCCAGCACACAAGAGATGTGGGGACAAGTTCTACGACCCCCTGCAGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                              TTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCATGACTCCTTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ProLeuGlnProProArgAlaMetAlaProArgGlyCysIleValAlaValPheAlaIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity:
                                                                                                   Sun Y,
                                        25-26;
                                                                                                                                                                                                                                                (first entry)
                                                                                                                                98US-0098825
                                                                                                                                                                                                                           specific gene 22638 clone 819141H SEQ ID NO:1.
                                                                                                                                                99WO-US20003.
                                     31pp;
                                                                                                  Recipon H,
                                                                                                                                                                                                                                                                                DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1.52e-64
668.00
100.00%
100.00%
100.00%
22
                                                                                                                                                                                                                                                                                914
                                     English.
                                                                                               Cafferkey
                                                         , staging, m
s measuring
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                     monitoring, imaging and
y bladder specific gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            771
117
0
0
0
                                                              and
                                                     (BSG)
                                                                                                                                                                                                                                                                                                                                                   100
                                                                                                                                                                                                                                                                                                                                                                  242
                                                                                                                                                                                                                                                                                                                                                                                80
                                                                                                                                                                                                                                                                                                                                                                                                182
                                                                                                                                                                                                                                                                                                                                                                                                               60
                                                                                                                                                                                                                                                                                                                                                                                                                              122
                                                                                                                                                                                                                                                                                                                                                                                                                                              40
                                                                                                                                                                                                                                                                                                                                                                                                                                                            62
```

'n

WO200000610-A2

sapiens.

```
AAZ98158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-092-297-17 (1-117) x AAA08111 (1-914)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  88888888888888888888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
                                                                        Human; signal peptide-containing.protein; HSPP; diagnosis; cancer; inflammation; cardiovascular disease; anticancer; anti-inflammatory; antimicrobial; nootropic; neuroprotective; cardiovascular; hepatotropic; reproductive disorder; developmental disorder; arteriosclerosis; psoriasis; acquired immune deficiency syndrome; anaemia; asthma; Crohn's disease; infection; Alzheimer's disease; schizophrenia; Parkinson's disease; Huntington's disease; ovulatory defect;
                                                                                                                                                                                                                                                                    Human signal peptide containing protein HSPP-50 cDNA
                                                                                                                                                                                                                                                                                                                        11-MAY-2000 . (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                               AAZ98158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       101 AsnCysAspSerAlaArgThrSerAspAspArgLeuCysArgSerValSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cells, tissues or body fluids. An increase in BSG levels compared to normal human control is associated with the presence or progression of method comprising measuring BSG is useful for detecting, diagnosing measuring BSG is useful for detecting, diagnosing in stage of bladder cancer. An antibody against BSG (I) labeled with treating bladder cancer are sourced in set of metastasis or a change paramagnetic ions or an isotope is useful for imaging bladder cancer and (I), especially conjugated to a cytotoxic agent is useful for treating bladder cancer. The method is efficient in discriminating which has not metastasised. The present sequence represents a BSG of the present sequence represents and the present sequence and the present sequence represents and the prese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Мо
...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          щ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PheArgValCysPheGluGlnCysCysProTrpThrPheMetValLysLeuIleAsnGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCTGATAAACCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGATGCTGTGCCAGCCACACAAGAGATGTGGGGACAAGTTCTACGACCCCCTGCAGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Scores:
                                                                                                                                                                                                                                                                                                                                                                                                             standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         914 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            s not metastasised. The present sequence represents used in the exemplification of the present invention
                                                                                                                                                                                                                                                                                                                                                                                                         CDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   193 A; 265 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1.9e-64
668.00
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 G; 218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              present invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                914
117
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 94
```

```
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                             Alignment
                                                                                           Š
                                                                                                                               밁
                                                                                                                                                            Š
                                                                                                                                                                                             US-09-092-297-17 (1-117) x AAZ98158 (1-748)
                                                                                                                                                                                                                                                                               Percent Similarity:
   8
                            δÃ
                                                              뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      31-JUL-1998;
01-OCT-1998;
11-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       reproductive or developmental disorders, (e.g. arteriosclerosis, clirnhosis, psoriasis, acquired immune deficiency syndrome, anaemia, asthma, Crohn's disease, microbial or other infections, congestive or ischaemic heart disease, Alzheimer's, Parkinson's or Huntington's diseases, schizophrenia, ovulatory defects, muscular dystrophy). HSPP nucleic acids can be used for the recombinant production of HSPP, for detecting HSPP in standard hybridisation and amplification assays (for diagnosis and monitoring), in gene therapy, as antisense, triplex-forming or ribozyme therapeutics, for detecting related sequences or genetic variations, and for chromosomal mapping. HSPP are also used to raise specific antibodies (Ab) and to screen for agonists and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAZ98109 to AAZ98242 encode AAY87224 to AAY87357 which represent the human signal peptide-containing proteins HSPP-1 to HSPP-134. HSPPs have anticancer, anti-inflammatory antimicrobial, nootropic, hepatotropic, neuroprotective, cardiovascular and antiasthmatic activities, and can be used in gene therapy. HSPPs can be used to treat or prevent disorders associated with decreased activity or function of HSPP. Antagonists of HSPP are used to treat or prevent disorders associated with increased activity or function of HSPP. Such diseases include cell proliferation (including cancer), inflammation, cardiovascular, neurological.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Lal P, Tank
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New human signal peptide-containing proteins useful in treatment, prevention and diagnosis of e.g. cancer, inflammation and cardiovascular disease \,\cdot\,
                                                                                                                                                                                                                                                                                                                                                               Sequence 748
                                                                                                                                                                                                                                                                                                                                                                                                           antagonists (potential therapeutic agents). Ab are used to diagnose, or monitor, HSPP-related diseases (in usual immunoassays), as therapeutic antagonists, in competitive drug screens, and for purification of HSPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 2000-160673/14.
P-PSDB; AAY87273.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (INCY-) INCYTE PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         06-JAN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       25-JUN-1999;
                                                                                                                                                                                                                                                                                                               Хо
..
   121
                                42
                                                                61
                                                                                                22
LeuGlnProProArgAlaMetAlaProArgGlyCysIleValAlaValPheAlaIlePhe
                                                                               CysIleSerArgLeuLeuCysSerHisGlyAlaProValAlaProMetThrProTyrLeu
                                                                                                                                CTGCAACCACCCAGAGCCATGGCTCCCCGAGGCTGCATCGTAGCTGTCTTTGCCATTTTC
                                                                TGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCATGACTCCTTACCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Page 281; 327pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       YT,
                                                                                                                                                                                                                                                                                                                                                               BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      YT, Gorgone GA,
Au-Young J, Yue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       98US-0094983.
98US-0102686.
98US-0112129.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       98US-0090762.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99WO-US14484
                                                                                                                                                                                                                                                                                                                                                               159 A;
                                                                                                                                                                                                                               8.66e-64
661.00
100.00%
100.00%
98.95%
21
                                                                                                                                                                                                                                                                                                                                                               227
                                                                                                                                                                                                                                                                                                                                                               Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Corley NC, Guegler KJ, Ba
H, Patterson C, Reddy R,
                                                                                                                                                                                                                                                                                                                                                               193
                                                                                                                                                                                                                                                            Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                Indels:
                                                                                                                                                                                                                                                                                                                                                               ç;
                                                                                                                                                                                                                                                                                                                                                                169
                                                                                                                                                                                                                                                                                                                                                               7
                                                                                                                                                                                                                                                                                                                                                                0 other;
                                                                                                                                                                                                                               748
116
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Baughn MR;
R, Hillman JL;
                                   61
                                                                                                  41
                                                                                                                                    60
     180
                                                                   120
```

Best Local Similarity:
Query Match:
DB:

Percent Similarity:

1.57e-32 372.00 100.00% 100.00% 55.69%

Length: Matches: Conservative:

0 0 0 0 0 0

US-09-092-297-17 (1-117) x AAX01684

(1-236)

Gaps: Mismatches: Indels: Alignment Scores:

236

49 A;

69 ü 62

<u>ი</u>

56

Ŧ,

0

Pred. No.:

```
ν
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      묽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
sequences AAX01683-85 represent overlapping clones specific for urinary tract tissue library BL172. The BL172 polynucleotides are used to detect target BL172 polynucleotides and BL172 mRNA and the BL172 polypeptides are used to detect BL172 antigens/antibodies in a test sample. The identification of certain markers in these methods are indicative of the presence of urinary tract disease, especially cancer. Additionally, the polypeptides are used to detect antibodies that bind specifically to a BL172 epitope derived from a BL172 polypeptide. Host cells containing a recombinant expression vector comprising the BL172 polypucleotide sequences are used to produce the polypeptides containing BL172 epitopes. The methods aid in diagnosis, detection, staging, monitoring, in the sequence of the se
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              wordon J, Granadosen, Hodges SC, Klass
Roberts-Rapp L, Russell JC, Stroupe Sn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAX01684;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BL172; urinary tract; marker; cancer; recombinant; human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAX01684 standard; DNA; 236
                                                                                                                                                                                                                                                                                                                                                                                                 Claim 1; Page 89; 114pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New purified polynucleotide BL172 derivatives and encoded polypeptides - useful in the identification of markers, which
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 1999-045802/04.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         05-JUN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           05-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO9855656-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                      prognostication,
                                                                                                                                                                                                                                                                                                                                                                                                                                                indicative of urinary tract diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (ABBO ) ABBOTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          62
                                         ognostication, in vivo imaging, prevention and treatment of diseases conditions associated with BL172, especially urinary tract cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CysTyrAspAspAlaValValProLeuAlaArgThrGlnThrCysGlyAsnCysThrPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCTGATAAACCAGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ArgValCysPheGluGlnCysCysProTrpThrPheMetValLysLeuIleAsnGlnAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tissue library BL172 gene specific cDNA clone 2624118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               97US-0869579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98WO-US11693
                                                                                                                                                                                                                                                                                                                                                                                                                                                     얹
                                                                                                                                                                                                                                                                                                                                                                                                                                                        conditions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MR, K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Friedman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Kratochvil JD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               81
```

```
Sequences AAX01683-85 represent overlapping clones specific for urinary CC tract tissue library BL172. The BL172 polynucleotides are used to detect CC target BL172 polynucleotides and BL172 mRNA and the BL172 polypeptides CC are used to detect BL172 antigens/antibodies in a test sample. The CC presence of urinary tract disease, especially cancer. Additionally, the CC polypeptides are used to detect antibodies that bind specifically to a CC polypeptide derived from a BL172 polypeptide. Host cells containing a CC recombinant expression vector comprising the BL172 polypeptide containing a cepitopes are used to produce the polypeptides containing BL172 copitopes. The methods aid in diagnosis, detection, staging, monitoring, CC prognostication, in vivo imaging, prevention and treatment of diseases or conditions associated with BL172, especially urinary tract cancer.
           Percent Similarity:
                                                     Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                          NO
..
                                                                             Sequence 196 BP;
                                                                                                                                                                                                                                                                                                                                                                                      Billing-medel PA, Cones, Gordon J, Granadosen, Hodge
                                                                                                                                                                                                                                                                                     Claim 1; Page 89; 114pp; English.
                                                                                                                                                                                                                                                                                                       New purified polynucleotide BL172 derivatives and encoded polypeptides - useful in the identification of markers, windicative of urinary tract diseases or conditions
                                                                                                                                                                                                                                                                                                                                                                         WPI; 1999-045802/04.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     05-JUN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         (ABBO ) ABBOTT LAB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               05-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     W09855656-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Urinary tract tissue library BL172 gene specific cDNA clone 1554838.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21-APR-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAX01683;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAX01683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ب
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ArgSerValSer 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATGGTGAAGCTGATAAACCAGAACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGCAGTGTCAGC 192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTCTACGACCCCTGCAGCACTGTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PheTyrAspProLeuGlnHisCysCysTyrAspAspAlaValValProLeuAlaArgThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          urinary tract; marker; cancer; recombinant; human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             standard; DNA; 196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 97US-0869579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          98WO-US11693
                                                                             38
       2.05e-32
370:00
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                             Cohen M, Co
                                                                          Α,
                                                                        70 C;
                                                                       44 G;
                                                                                                                                                                                                                                                                                                                                                                                           Colpitts TL, iges SC, Klass, Stroupe SD,
 Length:
Matches:
Conservative:
                                                                      44 T;
                                                                0 other;
                                                                                                                                                                                                                                                                                                                                                                                             Yu H;
                                                                                                                                                                                                                                                                                                                                                                                                                  Friedman PN;
196
64
                                                                                                                                                                                                                                                                                                                                                                                                     Kratochvil JD;
                                                                                                                                                                                                                                                                                                                     which are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60
```

```
XEEEEEXXXOOOOOOOO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 13
AAS92056
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q
The invention relates to isolated polynucleotide (I) and polypeptide (II) sequences. (I) is useful as hybridisation probes, and gene mapping, and in recombinant production of (II). The and gene mapping, and in recombinant production of (II). The polynucleotides are also used in diagnostics as expressed sequence tags to restore normal activity of (II) or to treat disease states involving quantitating a polypeptide in tissue, as molecular weight markers and as imaging of sites expressing (II). (I) and (II) are useful in medical disorders involving aberrant protein expression or biological activity.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-092-297-17 (1-117) x AAX01683 (1-196)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity: Query Match:
DB:
                                                                                                                                                                                                Claim 1; SEQ ID No 27860; 103pp; English.
                                                                                                                                                                                                                            New isolated polynucleotide and encoded polypeptides, us
diagnostics, forensics, gene mapping, identification of
responsible for genetic disorders or other traits and to
biodiversity
                                                                                                                                                                                                                                                                                                            P-PSDB;
                                                                                                                                                                                                                                                                                                                    WPI; 2001-639362/73.
                                                                                                                                                                                                                                                                                                                                                     Drmanac RT,
                                                                                                                                                                                                                                                                                                                                                                              (HYSE-) HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                                                                            31-MAR-2000;
23-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     30-MAR-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200175067-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           food supplement; medical imaging;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; chromosome mapping;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA encoding novel human diagnostic protein #27860.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13-FEB-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAS92056;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAS92056 standard; cDNA; 1338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                123 CTGATGCTGTGCCAGCCACACAAGAGATGTGGGGGACAAGTTCTACGACCCCCTGCAGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 ProLeuGlnProProArgAlaMetAlaProArgGlyCysIleValAlaValPheAlaIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CysCysTyrAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LeuMetLeuCysGlnProHisLysArgCysGlyAspLysPheTyrAspProLeuGlnHis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGTTGCTATGAT 194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCATGACTCCTTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCACTGCAACCACCAGAGCCATGGCTCCCCGAGGCTGCATCGTAGCTGTCTTTGCCATT
                                                                                                                                                                                                                                                                                                            ABG27869
                                                                                                                                                                                                                                                                                                                                                  Liu C,
                                                                                                                                                                                                                                                                                                                                                                                                                     2000US-0540217.
                                                                                                                                                                                                                                                                                                                                                                                                                                               2001WO-US08631.
                                                                                                                                                                                                                                                                                                                                                                                                       2000US-0649167
                                                                                                                                                                                                                                                                                                                                               Tang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.00%
55.39%
20
                                                                                                                                                                                                                                                                                                                                                 ΤY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gene mapping; gene therapy; forensic;
maging; diagnostic; genetic disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches:
                                                                                                                                                                                                                                      traits and to assess
                                                                                                                                                                                                                                                   mutations
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 forensic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               62
```

```
Best Local Si
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8888888888
 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-092-297-17 (1-117) x AAS92056 (1-1338)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits to assess biodiversity and to produce other types of data and products dependent on DNA and amino acid sequences. AAS64197-AAS94564 represent novel human diagnostic coding sequences of the invention.

Note: The sequence data for this patent did not appear in the printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                      Human; immune related disease; diagnosis; antiinflammatory; cardiant; dermatological; antiarthritic; antirheumatic; immunosuppressive; haemostatic; antiithyroid; antidiabetic; nootropic; neuroprotective; antianaemic; hepatotropic; virucide; antipsoriatic; antiallergic; antiasthmatic; systemic lupus erythematosus; rheumatoid arthritis; osteoarthritis; spondyloarthropathy; systemic sclerosis; sarcoidosis; idiopathic inflammatory myopathy; Sjogren's syndrome; thyroiditis; systemic vasculitis; autoimmune haemolytic anaemia; diabetes mellitus; autoimmune thrombocytopaenia; immune-mediated renal disease; demyelinating disease; hepatobiliary disease; whipple's disease; inflammatory bowel disease; jlutten-sensitive enteropathy; autoimmune disease; immune-mediated skin disease; allergic disease; immunological disease; transplantation associated disease; anaetic caster.
08-MAR-1999;
10-MAR-1999;
12-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1080
                                                                                                                                                                                                                                                                                                                                                                                                       Human PRO982 protein UNQ483 encoding cDNA SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                        29-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAC58632;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAC58632 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 1338 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ₹
::
                                                            02-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    aProMetThrProTyrLeuMetLeuCysGlnProHisLysArgCysGlyAspLysPheTy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCTGTCTTGGCGTCTCTGCATCCTCAGCCTTCTCTGATCATGTGGAGCCCCCAGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AlaValPheAlaIlePheCysIleSerArgLeuLeuCysSerHisGlyAla·ProValAl|
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCCCATGGGTGCTTATCTGATGCTGTGCCAGCCACAGGCAAGATGTGGGGACACGTTCTG
                                                                                                                                                                              rejection;
                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                            2000WO-US05841.
 99WO-US05028.
99US-0123618.
99US-0123957.
                                                                                                                                                                              graft-versus-host-disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       311 A; 350 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2.36e-18
252.50
73.08%
66.67%
37.80%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cDNA; 662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        348 G; 329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          H
..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                          ID NO:268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1338
52
5
20
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         35
```

```
08-SEP 1999;
13-SEP-1999;
15-SEP-1999;
15-SEP-1999;
05-OCT-1999;
29-OCT-1999;
29-NOV-1999;
30-NOV-1999;
                                                                                                                                                                                                                                                                                                                              23-JUN-1999;
20-JUL-1999;
26-JUL-1999;
28-JUL-1999;
                                                                                                                                                                                                                                                                                                                                                    14-MAY-1999;
02-JUN-1999;
                                                                                                                                                                                                                                                                      30-NOV-1999,
01-DEC-1999,
                                                                                                                                                                                                                                                                                                                                                                                    23-MAR-1999;
                                                                                                                                                                                    (GETH )
                                                                                                                                                                                    GENENTECH INC.
                                                                                                                                                                                                                  2000WO-US00219.
2000WO-US00277.
2000WO-US00376.
                                                                                                                                                                                                   2000WO-US03565.
2000WO-US04341.
2000WO-US04342.
                                                                                                                                                                                                                                 99WO-US28301
99WO-US28551
99WO-US28551
99WO-US28564
99WO-US30095
99WO-US30095
99WO-US310274
                                                                                                                                                                                                                                                                                      99US-0162506
99WO-US28214
                                                                                                                                                                                                                                                                                                                          99US-0146222
99WO-US20111
                                                                                                                                                                                                                                                                                                                                                                               990S-0125775
990S-0128849
                                                                                                                                                                                                                                                                            99WO-US28313
99WO-US28409
                                                                                                                                                                                                                                                                                                 99WO-US23089
                                                                                                                                                                                                                                                                                                      99WO-US21547
                                                                                                                                                                                                                                                                                                           99WO-US21090
                                                                                                                                                                                                                                                                                                                99WO-US2094
                                                                                                                                                                                                                                                                                                                                               9905-0141037
                                                                                                                                                                                                                                                                                                                                                     99WO-US12252
                                                                                                                                                                                                                                                                                                                                                          9905-0134287
                                                                                                                                                                                                                                                                                                                                                                         99WO-US08615
                                                                                                                                                                                                                                                                                                                      99WO-US20594
```

Ashkenazi AJ Kabakoff RC, Stewart TA, Tumas D, Baker KP, Go Pan J, Watanabe CK, Goddard A, Pennica Wood WI, Gurney AL, Shelton DL, Yan Hebert C, 3 Smith < Henzel Σ

2000-572271/53. DB; AAB33467.

Sixty four PRO polypeptides, useful in the diagnosis and treatment of immune related disorders, e.g. systemic lupus erythematosis, rheumatoid arthritis, osteoarthritis, thyroiditis and diabetes mellitus -

Claim 23; Fig 107; 309pp; English

The present invention describes sixty four human PRO proteins which can composed in the treatment of immune related diseases. The human PRO composed in the treatment of immune related diseases. The human PRO composed in the treatment of immune related diseases. The human PRO composed in the diseases are useful for treating and diagnosing immune related diseasers. The diseasers are consisted from systemic lupus erythematous, rheumatoid arthritis, spendyloarthropathies, consteoarthritis, juvenile chronic arthritis, spondyloarthropathies, consisted relations and constant in the second in the disease of the central constant in the control of arthritis, spondyloarthropathies, constant, autoimmune thrombocytopaenia, thyroiditis, diabetes mellitus, constant in the central disease, demyelinating diseases of the central constant in the central disease, demyelinating diseases of the central constant in the central disease, grant in the central constant in the central diseases, demyelinating diseases, inflammatory bowel disease, grant diseases, altergic diseases, constant in the central constant in the central constant in the constant in the constant in the central constant in the central constant in the constant in the central constant in the central constant in the constant in the central c sequences given in the exemplification of

Sequence 662 BP; 152 A; 187 C; 167 G; 156 T; 0 other;

```
RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       õ
                                                                                                                                                                                                                                                                                                                                                                                                                             AAA5126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ġ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-092-297-17 (1-117) x AAC58632 (1-662)
09-FEB-1999;
10-FEB-1999;
12-FEB-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
                                                           16-DEC-1998;
22-DEC-1998;
12-JAN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Alignment
                                                                                                                   01-DEC-1999;
                                   2-JAN-1999
                                              12-JAN-1999;
                                                                                            16-DEC-1998;
                                                                                                                                          22-JUN-2000.
                                                                                                                                                                WO200036102-A2.
                                                                                                                                                                                                  sig_peptide
                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                        PRO982; secreted gene therapy; ss.
                                                                                                                                                                                                                                                                                                                                       Human DNA encoding
                                                                                                                                                                                                                                                                                                                                                                 26-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                            AAA51261 standard;
                                                                                                                                                                                                                                                                                                                                                                                          AAA51261;
                                                                                                                                                                                                                                                                                                                                                                                                                                            323 CTGGGTATGAAGTCTCAGTGTCACTTATCTCCCATCTCCCGGAGCTGTACCAGGAACAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        203 ATCTTATCCTTAAAGGAGACCCGCCGCTGTGGCTCCACCTGCACCTTCTGGCCCCTGCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      143 ACACCCAGGTGTGGGAACAAGATCTACAACCCTTCAGAGCAGTGCTGTTATGATGATGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAGCTCTGCTGTCCCGAGTCTTTTGGCCCCCAGCAGAAGTTTCTTGTGAAGTTGAGGGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GluGlnCysCysProTrpThr----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ValValProLeuAlaArgThrGlnThrCysGlyAsn---CysThrPheArgValCysPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           H1sLysArgCysGlyAspLysPheTyrAspProLeuGlnH1sCysCysTyrAspAspAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LeuCysSerHisGlyAlaProValAlaProMetThrProTyrLeuMetLeuCysGlnPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAGTGTTCAAAAGGAACTACAGACGCTCCTGTTGGCTCAGGACTGTGGCTGTGCCAGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGCATGAGGCCACGATGCTGCATCTTGGCTCTTGTCTGCTGGATAACAGTCTTCCTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AlaMetAlaProArgGlyCysIleValAlaValPheAlaIlePheCysIleSerArgLeu
:::||| |||||| |||||:::|||:::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Scores:
      99US-0115565.
99US-0115733.
99US-0119341.
99US-0119537.
                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                    9805-0113511.
9905-0115558.
                                                                                        98US-0112851.
                                                                                                               99WO-US28634
                                                                                                                                                                                                /product=
/note= "a
26..88
                                                                                                                                                                                                                                                     .ocation/Qualifiers
                                                                                                                                                                                                                                   *tag=
                                                                                                                                                                                                                                                                                                                 protein;
                                                                                                                                                                                                                                                                                                                              PRO982, a novel secreted protein
                                                                                                                                                                                                                                                                                                                                                                                                           CDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4.86e-17
237.00
55.00%
40.83%
35.48%
21
                                                                                                                                                                                                    "a secreted protein"
                                                                                                                                                                                      o
                                                                                                                                                                                                                                 ρ
                                                                                                                                                                                                                                                                                                                                                                                                           662
                                                                                                                                                                                                                                                                                                 transmembrane protein; recombinant production;
                                                                                                                                                                                                                      PR0982
                                                                                                                                                                                                                                                                                                                                                                                                           ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   - IleAsnGlnAsnCysAspSerAlaArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  82
```

```
Search completed: November Job time : 213 secs
                                                     밁
                                                                                                        밁
                                                                                                                               δÃ
                                                                                                                                                          В
                                                                                                                                                                                δÃ
                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                           δõ
                                                                                                                                                                                                                                                                                                                                                      US-09-092-297-17 (1-117) x AAA51261 (1-662)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RG CCCCCCCCCXXX PPT XXX
                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
                                                                                                                                                         203
                                                                                                                                                                                      143 ACACCCAGGTGTGGGAACAAGATCTACAACCCTTCAGAGCAGTGCTGTTATGATGATGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This cDNA encodes pR0982, a novel secreted protein. The invention concerns novel secreted and transmembrane proteins, designated pR0 production of pR0 polypeptides. The cDNA and gene sequences are useful in the recombinant libraries to isolate cDNAs with sequence identity to PR0 polypeptides or disorders. The encoding the PR0 polypeptides and analyzing genetic useful for the development and screening of therapeutically useful reagents. They can also be used to produce transgenic animals reagents. They can also be used in gene therapy, e.g. to replace a
                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 662 BP; 152 A; 187 C;
                                                                                                                                                                                  67
                                                                                                                                                                                                                                      47
                                                                                                                                                                                                                                                              83
                                                                                                                                                                                                                                                                                        27
                                                                                                                                                                                                                                                                                                                 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 1; Fig. 5; 154pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Isolated nucleic acid molecule encodes a transmembrane polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2000-431586/37.
P-PSDB; AAY96731.
                                                                                                                                                                                                                                                                                                                    7 AlaMetAlaProArgGlyCysIleValAlaValPheAlaIlePheCysIleSerArgLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Botstein D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          02-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gurney AL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (GETH ) GENENTECH INC.
                            CTGGGTATGAAGTCTCAGTGTCACTTATCTCCCATCTCCCGGAGGTGTACCAGGAACAGG
                                                                                GAGCTCTGCTGTCCCGAGTCTTTTGGCCCCCAGCAGAAGTTTCTTGTGAAGTTGAGGGTT
                                                                                                                    GluGlnCysCysProTrpThr--
                                                                                                                                   ATCTTATCCTTAAAGGAGACCCGCCGCTGTGGCTCCACCTGCACCTTCTGGCCCTGCTTT
                                                                                                                                                            ValValProLeuAlaArgThrGlnThrCysGlyAsn---CysThrPheArgValCysPhe
                                                                                                                                                                                                            HistysargCysGlyAspLysPheTyrAspProLeuGlnHisCysGysTyrAspAspAla
                                                                                                                                                                                                                                          CAGTGTTCAAAAGGAACTACAGACGCTCCTGTTGGCTCAGGACTGTGGCTGTGCCAGCCG
                                                                                                                                                                                                                                                                 LeuCysSerHisGlyAlaProValAlaProMetThrProTyrLeuMetLeuCysGlnPro 46
                                                                                                                                                                                                                                                                                            AGCATGAGGCCACGATGCTGCATCTTGGCTCTTGTCTGCTGGATAACAGTCTTCCTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Desnoyers L,
Pan J, Roy MA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99WO-US12252
                                                                                                                                                                                                                                                                                                                                                                                      4.86e-17
237.00
55.00%
40.83%
35.48%
21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ferrara N,
Stewart
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     167 G; 156 T;
                                                     ---IleAsnGlnAsnCysAspSerAlaArg 106
                                                                                                                                                                                                                                                                                                                                                                                Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                         Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                               Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                z
                                                                                                         ----PheMetValLysLeu-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fong 5,
Tumas 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRO polypeptide which
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Watanabe CK;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Goddard
                               382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            is
                                                                                                          97
                                                                                                                                   262
                                                                                                                                                             85
                                                                                                                                                                                       202
                                                                                                                                                                                                              66
                                                                                                                                                                                                                                          142
                                                                                                                                                                                                                                                                                            82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A
```

time : 213 secs

2002, 03:06:00

```
Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Post-processing: Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Word size :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                score greater than or equal to the score of the result beir and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                               Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            seq length: 0 seq length: 2000000000
100.0
93.3
93.1
86.6
86.6
86.6
86.6
                                                                                                                                                                                                                                     Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OLIGO_NUC
Gapop 60.0 , Gapext 60.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1736436 seqs, 858457221 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-092-297-5
763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                November 2, 2002, 23:14:12; Search time 209 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               N_Geneseq_032802:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTCCACTGCAACCACCCAGA.....ATAAATTTATGTACTTTATA 763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GenCore version 5.1.3 Copyright (c) 1993 - 2002 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                   /SIDS1/gcgdata/geneseq/geneseqn-embl/NA2001A.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-embl/NA2001B.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-embl/NA2002.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1992.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1993.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1994.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1995.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1995.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1997.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1999.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1999.DAT:*
                                                                                                                                                                                                                                     Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2000.DAT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1990.DAT:
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1991.DAT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IDS1/gcgdata/geneseq/geneseqn-emb1/NA1988.DAT:*
SIDS1/gcgdata/geneseg/geneseqn-emb1/NA1989.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /gcgdata/geneseq,
                                                                                                                                                                                                                                     Ħ
                                                                                                             AAX01686
AAX01686
AAZ24391
AAA77668
                                                                    AAA37062
AAS21491
                                              AAC85962
                                                                                                                                                                                                                                                                                                       SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (without alignments) 6267.970 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3472872
                                                                                Urinary tract tiss
Urinary tract tiss
Human bladder tumo
Human PRO1274 CDNA
Human PRO1274 (UNQ
                                                                                                                                                                                                                             Description
                                       Human cDNA sequenc
Native sequence of
                 DNA encoding prote
```

					იი ი	O
444	38 40 41	3 3 3 3 3 4 3 4 5 7 6 5 7 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	330000	222222222222222222222222222222222222222	113 114 116 118	11
1111	11111 20000	18888	1888	7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	236 236 22 22 22 21	569 366
222		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		, , , , , , , , , , , , , , , , , , ,		æ <u>*</u>
3156 3156 4596	714 714 714 2844	491 508 714 714	307 422 477 477	2421 2421 2421 2421 2427 252	236 196 1338 22 22 48 9229	748 417
180 200	22222	22222	222122	21 21 21 21 21	0000000	21 20
AAV71603 AAV69285 AAV03326	AAK79185 AAK79186 AAK79189 AAK79189	AAK66324 AAK66324 AAH98095 ABA16681 ABA16682 ABA16683	AAK55566 AAT80646 ABA54027 AAK02300	AAC75372 AAT80723 AAV49808 AAD00747 AAD00748 AAC05699 AAX99548	0000000	AAZ98158 AAX01685
	ν.					
Human NF-kB-induci Human NF-kB-induci DNA sequence of NF	immune/haem immune/haem immune/haem immune/haem immune/haem inducing ki	immune/haem e 7-transmem nervous sys nervous sys	HÜ	RFX OFF topoi topoi DNF-II ctivit ctivit ctivit	Urinary tract tiss Urinary tract tiss Urinary tract tiss DNA encoding novel BL172 gene amplify BL172 gene amplify PRO cDNA amplifica Entire sequence of	Human signal pepti Urinary tract tiss

## RESULT 1 AAX01687 XXX FTT FTH XXX XXX XXX кеу BL172; urinary tract; marker; cancer; recombinant; human; ss Urinary tract tissue library BL172 gene consensus sequence. 21-APR-1999 (first entry) Homo sapiens AAX01687; AAX01687 standard; DNA; 763 /\*tag= a /product= "BL172 polypeptide" /note= "the start codon is not indicated" Location/Qualifiers ВP

ALIGNMENTS

Billing-medel PA, Coh Gordon J, Granadosen,

Cohen M,

n M, Colpitts TL, Friedman PN; Hodges SC, Klass MR, Kratochv

Kratochvil JD;

(ABBO ) ABBOTT LAB

05-JUN-1998;

10-DEC-1998. W09855656-A1

150 67

05-JUN-1997;

97US-0869579 98WO-US11693

```
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sample. The identification of certain markers in these methods are indicative of the presence of urinary tract disease, especially cancer. Additionally, the polypeptides are used to detect antibodies that bind specifically to a BL172 epitope derived from a BL172 polypeptide. Host cells containing a recombinant expression vector comprising the BL172 polypucleotide sequences are used to produce the polypeptides containing BL172 epitopes. The methods aid in diagnosis, detection, staging, monitoring, prognostication, in vivo imaging, prevention and treatment of diseases or conditions associated with BL172, especially urinary tract cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This represents a consensus sequence of a clone specific for urinary tract tissue library BL172. The BL172 polynucleotides (AAX01683-87) are used to detect target BL172 polynucleotides and BL172 mNA and the BL172 polypeptides are used to detect BL172 antigens/antibodies in a test
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 1; Page 90; 114pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New purified polynucleotide BL172 derivatives and encoded polypeptides - useful in the identification of markers, windicative of urinary tract diseases or conditions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 1999-045802/04.
                                                                                          481
                                                                                                                    481
                                                                                                                                                 421
                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Roberts-Rapp L,
                                                                                                                                                                                                           361
                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
es 763; Conserv
GGACTCTGAACCCTCCTGATGACCCSTATGGCCAACATCAACCCGGCACCACCCCAAGGC
                                            CCACAGGTCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTGCTGATGGGGGGCCCAG
                                                                                                                                                              AACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCGCTGCCCTGAGGAGGC
                                                                                                                                                                                                     ACTGTTGCTATGATGATGCCGTCCGTGCCCTTGGCCAGGACCCAGACGTGTGGGAAACTGCA
                             CCACAGGTCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTGCTGATGGGGGCCCCAG
                                                                                     AACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCGCTGCCCTGAGGAGGC
                                                                                                                                              AGAACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGCTAATGGA
                                                                                                                                                                                                                                                                                                                                                                                ACTGTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCAGACGTGTGGAAACTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCTGATGCTGTGCCAGCCACACAGAGATGTGGGGGACAAGTTCTACGACCCCCTGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCTGATGCTGTGCCAGCCACACAAGAGATGTGGGGACAAGTTCTACGACCCCCTGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               763 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; ilarity 100.0%; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             162 A; 231 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Russell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ر
ال
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 763; D
Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Stroupe SD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            194 G; 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            T; 1 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Yu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 763;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           which
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           are
 660
                                                        600
                                                                                                                                                                                                                                   420
                                                                                                                                                                                                                                                                                             360
                           600
                                                                                       540
                                                                                                                                              480
                                                                                                                                                                           480
                                                                                                                                                                                                                                                                360
                                                                                                                                                                                                        420
                                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                                                                   300
                                                                                                                                                                                                                                                                                                                                                                                240
                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

Ş

8 δÃ

1 CTCCACTGCAACCCACAGAGCCATGGCTCCCCGAGGCTGCATCGTAGCTGTCTTTTGCCA 60

Query Match Best Local S Matches 762

Similarity

93.38;

Score 712; DB Pred. No. 0; 0; Mismatches

1:

0

Gaps

60

BB

Length Indels

Conservative

Sequence 763

BP; 162 A; 231 C;

195

G; 175 T;

0

other;

Š 밁 Ş

밁

Ş

밁 δÃ В Š 밁 δÃ 밁 Ş 밁 Š 밁 Š 밁 Š

용

```
Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                               This represents a full-length sequence of a clone specific for urinary tract tissue library BL172. The BL172 polynucleotides (AAX01683-87) are used to detect target BL172 polynucleotides and BL172 mRNA and the BL172 polypeptides are used to detect BL172 antigons/antibodies in a test sample. The identification of certain markers in these methods are indicative of the presence of urinary tract disease, especially cancer. Additionally, the polypeptides are used to detect antibodies that bind specifically to a BL172 epitope derived from a BL172 polypeptide. Host cells containing a recombinant expression vector comprising the BL172 polynucleotide sequences are used to produce the polypeptides containing BL172 epitopes. The methods aid in diagnosis, detection, staging, monitoring, prognostication, in vivo imaging, prevention and treatment of diseases or conditions associated with BL172, especially urinary
                                                                                                                                                                                                                                                     Claim 1; Page 89-90; 114pp; English.
                                                                                                                                                                                                                                                                                  New purified polynucleotide BL172 derivatives and encoded polypeptides - useful in the identification of markers, which indicative of urinary tract diseases or conditions
                                                                                                                                                                                                                                                                                                                                                                                          Billing-medel PA, Coh
Gordon J, Granadosen,
                                                                                                                                                                                                                                                                                                                                                  WPI; 1999-045802/04.
                                                                                                                                                                                                                                                                                                                                                                             Roberts-Rapp L, Russell JC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        05-JUN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     05-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10-DEC-1998.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Urinary tract tissue library BL172 gene full length clone 1554838IH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAX01686 standard; DNA; 763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAX01686
                                                                                                                                                                                                                                                                                                                                                                                                                                        (ABBO ) ABBOTT LAB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CAGGAGCAAAGCACAGGATCATAATAAATTTATGTACTTTATA 763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CAGGAGCAAAGCACAGGATCATAATAAATTTATGTACTTTATA 763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGGCTGGGGAACCCTTCACCCTTCTGTGAGATTTTCCATCATCTCAAGTTTCTCATCTATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGGCTGGGGAACCCTTCACCCTTCTGTGAGATTTTCCATCATCTCAAGTTCTCTATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98WO-US11693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            tract; marker;
                                                                                                                                                                                                                                                                                                                                                                                                          Cohen M,
                                                                                                                                                                                                                                                                                                                                                                        en M, Colpitts TL, Fri
Hodges SC, Klass MR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           recombinant;
                                                                                                                                                                                                                                                                                                                                                                                                     Friedman PN,
                                                                                                                                                                                                                                                                                                                                                                                        Kratochv11
                                                                                                                                                                                                                                                                                                                                                                                           ď,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   660
```

```
RESULT 3
AAZ24391
ID AAZ2
XX AAZ2
XX AAZ2
XX Huma
XX Expr
KW E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ő
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                Human bladder tumour cDNA library derived EST 3.
                                            21-APR-1998;
                                                                                    21-APR-1998;
                                                                                                                                                                        DE19818619-A1
                                                                                                                                                                                                                Homo sapiens.
                                                                                                                                                                                                                                                        treatment;
                                                                                                                                                                                                                                                                              Expressed sequence
                                                                                                                                                                                                                                                                                                                                                                   14-FEB-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAZ24391 standard; cDNA; 762 BP
(META-) METAGEN GES GENOMFORSCHUNG MBH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGGAGCAAAGCACAGGATCATAATAAATTTATGTACTTTATA 763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCACAGGTCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTGGTGATGGGGGCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGGCTGGGGAACCCTTCACCCTTCTGTGAGATTTTCCATCATCTACAAGTTCTCTATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGACTCTGAACCCTCCTGATGACCCSTATGGCCAACATCAACCCGGCACCACCCCAAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGACTCTGAACCCTCCTGATGACCCGTATGGCCAACATCAACCCGGCACCACCCCAAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCGCTGCCGTGAGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGAACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGCTAATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCTTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCTGATAAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACTGTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCAGACGTGTGGAAACTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGGCTGGGGAACCCTTCACCCTTCTGTGAGATTTTCCATCATCTCAAGTTCTCTATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCTGATGCTGTGCCAGCCACAAGAGATGTGGGGACAAGTTCTACGACCCCCTGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCTGATGCTGTGCCAGCCACACAGAGATGTGGGGACAAGTTCTACGACCCCCTGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTTTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCATGACTCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTTTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCCATGACTCCTT
                                                                                                                                                                                                                                                        gene
                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                            98DE-1018619
                                                                                  98DE-1018619
                                                                                                                                                                                                                                                      ice tag; human; bladder; tumour; cancer;
therapy; EST; ss.
                                                                                                                                                                                                                                                                          cytostatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      120
```

```
This invention describes novel polypeptide fragments (I) and the polynucleotides (II) that encode them that are highly expressed in a thuman bladder tumour and which have cytostatic activity. (II) are used for recombinant expression of (I) and to isolate complete genes. (I) are used to identify agents suitable for treatment of bladder cancer, to directly treat this form of cancer (including expression from gene therapy vectors) or are used in a preparation for cancer treatment. (I) is also used for the generation of specific antibodies. (II) are identified by assembling ESTs (expressed sequence tags) from a particular tissue type before comparison of expression patterns. This callows a significantly longer fragment of the gene to be revealed, and therefore reduces the number of failures associated with the fact that ESTs from different libraries may represent different parts of the same unknown gene, distorting the estimated frequency of occurrence in a particular tissue. AAA33260-Z43309. represent expressed sequence tag (EST) fragments isolated from a human bladder tumour cDNA library which encode the proteins represented in AAY66143-Y66198.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        New nucleic acid sequences derived polypeptides, for t of therapeutic agents -
                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 3; Page 62; 132pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rosenthal A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Specht
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ŧ,
                                                                                                                                                                                                                                                                                                                                                                                                                 German.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hinzmann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              s expressed treatment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ₽,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         in bladder tumor tissue, and of bladder tumor and identification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Schmitt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pilarsky
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Dahl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               H
```

Sequence 762 BP; 162 A; 232 C; 194 G; 174 T; 0 other;

20;

Length

Ş В δã γQ 밁 日 Ş 맑 ğ δÃ 밁 밁 Š 멍 δÃ 맑 δõ 용 δÃ Matches 760; Query Match Best Local Similarity 541 481 481 421 421 361 361 301 301 241 241 181 181 121 121 61 13 CCACAGGTCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTGTGCTGATGGGGGGCCCAG AACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCGCTGCCCTGAGGAGGC AACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCCACCCTGCCGCTGCCCTGAGGAGGC ACTGTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCAGACGTGTGGGAAACTGCA ACCTGATGCTGTGCCAGCCACACAAGAGATGTGGGGACAAGTTCTACGACCCCCTGCAGC 180 TTTTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCATGACTCCTT 120 AGAACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGCTAATGGA ACTGTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCAGACGTGTGGAAACTGCA ACCTGATGCTGTGCCAGCCACACAAGAGATGTGGGGGACAAGTTCTACGACCCCCTGCAGC TTTTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCATGACTCCTT Conservative 93.1%; Score 710; DB Pred. No. 0; 0; Mismatches 0; 1; Indels 0; Gaps 600 480 480 360 540 540 420 420 360 240 180 300 300 240 0

. ...

· .....

```
CCX GX GY TOTIC TO THE REPORT OF THE REPORT 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 4
AAA77668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               吊
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    맑
                                                                                                                                                                                                                                                                                                                                                                                                                                14 -MAY -1999
02 -JUN-1999
23 -JUN-1999
20 -JUL-1999
26 -JUL-1999
01 -SEP-1999
08 -SEP-1999
08 -SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   diagnosis; to angiogenic; progression cytostatic;
                                                                                                                                                                                                                         Ashkenazi AJ,
Godowski PJ,
Watanabe CK,
                                                                         Nucleic acids encoding PRO polypeptides useful for preventing, diagnosing and treating diagnosing a cardiovascular, endothelial angiogenic disorders in mammals -
                                  Claim 61;
                                                                                                                                                            WPI; 2000-412154/35.
P-PSDB; AAB24425.
                                                                                                                                                                                                                                                                                                                                                                                                                   15-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                08-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAA77668
                                                                                                                                                                                                                                                                                                             (GETH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO200032221-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human PRO1274 cDNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  07-NOV-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12-JAN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  541
                                                                                                                                                                                                                                                                                                                                                    5-SEP-1999;
5-OCT-1999;
9-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGGCTGGGGAACCCTTCACCCTTCTGTGAGATTTTCCATCATCTCTAAGTTCTCTTCTATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAGGAGCAAAGCACAGGATCATAATAAATTTATGTACTTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGACTCTGAACCCTCCTGATGACCCCTATGGCCAACATCAACCCGGCACCACCCCAAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGACTCTGAACCCTCCTGATGACCCSTATGGCCAACATCAACCCCGGCACCACCCCAAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCACAGGTCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTGCTGATGGGGGCCCAG
                                                                                                                                                                                                                                                                                                           J
                                                                                                                                                                                                                                                                                                           GENENTECH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       standard;
                                    Fig 75; 315pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ); promotion; inhibition; angiogenesis; cardiovasc
trauma; wound; cancer; atherosclerosis; cardiac
;; proliferative; cardiant; cardiovascular; antiat
;; gene therapy; vaccine; ss.
                                                                                                                                                                                                                         Gurney AL, Williams PM.
                                                                                                                                                                                                                                                                                                                                                99US-0141037
99US-0144758
99US-0145698
99WO-US20111
99WO-US20594
99WO-US21090
99WO-US21090
99WO-US21547
99WO-US21547
99WO-US21547
99WO-US21547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99WO-US12252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99US-0134287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98US-0112850
99US-0115554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98WO-US25108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99WO-US28313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99WO-US05028
                                                                                                                                                                                                                                                                                                           INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CDNA; 771
                                                                                                                                                                                                                           M,
                                    English.
                                                                                                                                                                                                                         Ferrara N,
Klein RD,
4, Wood WI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ВÞ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       anglogenesis; cardiovascularisation;
atherosclerosis; cardiac hypertrophy;
t; cardiovascular; antiatherosclerotic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NO:196
                                                                                                                                                                                                                                            Gerber
Kuo SS,
                                                                                                                                                                                                                                          H, Hillan
Paoni NF,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  761
                                                                                                                                                                                                                                            KJ, Go
Smith
                                                                                                                                                                                                                                            Goddard
th V;
                                                                                               ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              600
                                                                                                                                                                                                                                                                A
```

The

present invention describes nucleic

acids

encoding

PRO polypeptides

밁

721

763

```
δÃ
                                                    밁
                                                                         δÃ
                                                                                                     밁
                                                                                                                            Š
                                                                                                                                                        밁
                                                                                                                                                                              Š
                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Sim
Matches 761;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  inappropriate PRO expression such as cardiovascular, endothelial or anglogenic disorders in mammals (e.g. atherosclerosis, cancers and cardiac hypertrophy). For example, the nucleic acids (Nc3) and vectors containing them and the PRO polypeptide may be used to treat disorders associated with decreased PRO expression. AAA77510 to AAA77721 and AAB24438 to AAB24435 represent nucleotide and protein sequences used in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       useful for preventing, diagnosing and treating diagnosing a cardiovascular, endothelial or angiogenic disorder in mammals by modulating cell proliferation, angiogenesis and cardiovascularisation, and for identifying agonists and antagonists of these processes. The nucleic acids and the proteins they encode may be used in the prevention, treatment and diagnosis of diseases associated with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 771 BP; 169 A; 231 C;
                          721
                                                     661
                                                                             661
                                                                                                     601
                                                                                                                              601
                                                                                                                                                        541
                                                                                                                                                                                541
                                                                                                                                                                                                         481
                                                                                                                                                                                                                                 481
                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGACTCTGAACCCTCCTGATGACCCSTATGGCCAACATCAACCCGGCACCACCCCAAGGC
                                                                                                                                                    CCACAGGTCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTGCTGATGGGGGCCCAG
                                                                                                                                                                                                                                                                                                        AGAACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGCTAATGGA
                                                                TGGCTGGGGAACCCTTCACCCTTCTGTGAGATTTTCCATCATCTCTAAGTTCTCTTCTATC
                                                                                                    GGACTCTGAACCCTCCTGATGACCCCTATGGCCAACATCAACCCGGCACCACCCCAAGGC
                                                                                                                                                                                                     ACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCAGCTGCCCTGAGGAGGC
                                                                                                                                                                                                                                                        GGTGTTACCTGAGATCTGGGATGCTGAGTGGCTGTTTGGGGGCCCAGAGAAAACACACTC
                                                                                                                                                                                                                                                                                                                                                                                                                            CCTTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCCGATAAAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCTGATGCTGTGCCAGCCACAAGAGATGTGGGGACAAGTTCTACGACCCCCTGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTTTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCCAGTGGGCCCCCATGACTCCTT
                                                                                                                                                                                                                     AACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCGCTGCCCTGAGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                               CCTTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCTGATAAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACTGTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCAGACGTGTGGAAACTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTTTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCATGACTCCTT
                                                  TGGCTGGGGAACCCTTCACCCTTCTGAGATTTTCCATCATCTCAAGTTCTCTTCTATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACTOTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCAGACGTGTGGAAACTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCTGATGCTGTGCCAGCCACACAAGAGATGTGGGGACAAGTTCTACGACCCCCTGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       86.6%;
99.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 661; DB Pred. No. 0; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           195 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           176 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             other;
                          763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                            540
                                                                          720
                                                                                                  660
                                                                                                                            660
                                                                                                                                                     600
                                                                                                                                                                             600
                                                                                                                                                                                                                                                                                480
                                                                                                                                                                                                                                                                                                                                 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
                                                  720
                                                                                                                                                                                                     540
                                                                                                                                                                                                                                                        480
                                                                                                                                                                                                                                                                                                         420
                                                                                                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                                                                                                     360
                                                                                                                                                                                                                                                                                                                                                                                                               300
                                                                                                                                                                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

```
RESULT 5
AAA37062
                                                                                                                     17-SEP-1998
18-SEP-1998
18-SEP-1998
18-SEP-1998
                                                                                                                                                                                        15-SEP-1998;
15-SEP-1998;
15-SEP-1998;
16-SEP-1998;
16-SEP-1998;
16-SEP-1998;
16-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                               01-SEP-1998;
01-SEP-1998;
01-SEP-1998;
                                                                                       22-SEP-
23-SEP-
                                                                23-SEP-1998;
23-SEP-1998;
                                                                                                      18-SEP-1998
                                                                                                                                                                          17-SEP-1998
17-SEP-1998
                                                                                                                                                     17-SEP-199
                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200012708-A2
                                                                                                                                                            7-SEP-1998
                                                                                                                                                                    7-SEP-1998
                                                                                                                                                                                                                                                               10-SEP-1998
10-SEP-1998
                                                                                                                                                                                                                                                                                                                                                                                                              01-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                              09-MAR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human; PRO polypeptide; membrane bound protein; receptor; diagnosis; transmembrane; secretion; immunoadhesion; pharmaceutical; screening;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human PRO1274 (UNQ644) cDNA sequence SEQ ID NO:137.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        08-AUG-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAA37062;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAA37062 standard; cDNA; 771 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
  98US-0099741
98US-0099754
98US-0099763
98US-0099808
98US-0099815
98US-0100385
98US-0100661
98US-0100662
98US-0100664
98US-0100664
98US-0100684
98US-0100711
98US-0100848
98US-0100919
98US-0100849
98US-01010684
98US-0100147
98US-010147
                                                                                                                                                                                                                                                                                                                   98US-0099598.
98US-0099602.
98US-0099642.
                                                                                                                                                                                                                                                                                                                                                98US-0098716.
98US-0098749.
98US-0098750.
98US-0098803.
98US-0098821.
98US-0098843.
98US-0099536.
                                                                                                                                                                                                                                                                                                                                         9805-0099596
                                                                                                                                                                                                                                                                                                                                                                                                              99WO-US20111
17-NOV-1998;
17-NOV-1998;
18-NOV-1998;
18-NOV-1998;
18-NOV-1998;
18-NOV-1998;
18-NOV-1998;
18-NOV-1998;
                                                                                                                                                                                                                  26-OCT-1998
27-OCT-1998
27-OCT-1998
27-OCT-1998
27-OCT-1998
27-OCT-1998
28-OCT-1998
28-OCT-1998
28-OCT-1998
28-OCT-1998
28-OCT-1998
28-OCT-1998
28-OCT-1998
29-OCT-1998
                                                                                                                                                                                                                                                                                                                     02-0CT-1998
06-0CT-1998
06-0CT-1998
07-0CT-1998
07-0CT-1998
07-0CT-1998
07-0CT-1998
07-0CT-1998
07-0CT-1998
07-0CT-1998
08-0CT-1998
                                                                                                                                10-NOV-1998;
17-NOV-1998;
17-NOV-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     30-SEP-1998;
30-SEP-1998;
01-OCT-1998;
01-OCT-1998;
(GETH ) GENENTECH INC
                                                                                                                                                                                     03-NOV-1998
                                                                                  17-NOV-1998
17-NOV-1998
                                                                                                                                                      03-NOV-1998;
                                                                                                                                                                      03-NOV-1998
                                                                                                                                                                             03-NOV-1998
                                                                                                                                                                                                    29-OCT-1998
30-OCT-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29-SEP-1998;
29-SEP-1998;
29-SEP-1998;
29-SEP-1998;
                                                                                                         17-NOV-1998
                                                                                                                         .7-NOV-1998;
             98US-0102484

98US-0102487

98US-0102487

98US-0102684

98US-0102684

98US-0102684

98US-010314

98US-0103314

98US-0103313

98US-0103313

98US-0103328

98US-0103328

98US-0103328

98US-0103678

98US-0103678

98US-0105104

98US-0105104

98US-0105104

98US-0105502

98US-0105694

98US-0106023

98US-0106023

98US-0106031

98US-0106033

98US-0106384

98US-0108801

98US-0108801

98US-0108848

98US-0108848

98US-0108848

98US-0108848

98US-0108848

98US-0108851

98US-0108851

98US-0108851

98US-0108852
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 98US-0102207.
98US-0102240.
98US-0102307.
```

```
밁
                                           Ş
                                                                 밁
                                                                                     δÃ
                                                                                                                                                                        δõ
                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                               δ
                                                                                                        밁
                                                                                                                               δõ
                                                                                                                                                       D
                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                      닭
                                                                                                                                                                                                                                                                                                                                                                                                                                           οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query
Best L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAA37022 to AAA37144 encode the new isolated human transmembrane, receptor or secreted PRO polypeptides given in AAY99340 to AAY99462. The transmembrane and receptor PRO proteins can be used for screening of potential peptide or small molecule inhibitors of the relevant receptor/ligand interactions. The polypeptides and nucleotide sequences encoding then have various industrial applications, including uses as pharmaceutical and diagnostic agents. AAA37145 to AAA37330 represent PCR primers and hybridisation probes used in the isolation of the PRO polypeptides from the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New mammalian DNA sequences encoding transmembrane, receptor or secreted PRO polypeptides, useful for screening of potential peptide or small molecule inhibitors of the relevant receptor/ligand interactions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 2; Fig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 771 BP; 169 A; 231 C; 195 G; 176 T; 0 other;
  661
                        109
                                            601
                                                                  541
                                                                                        541
                                                                                                             481
                                                                                                                                 481
                                                                                                                                                        421
                                                                                                                                                                      421
                                                                                                                                                                                                  361
                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local 761;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Baker
                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 CTCCACTGCAACCACCCAGAGCCATGGCTCCCCGAGGCTGCATCGTAGCTGTCTTTGCCA
                     GGACTCTGAACCCTGCTGATGACCCCTATGGCCAACATCAACCCGGCACCACCCCCAAGGC
                                                              CCACAGGTCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTGCTGATGGGGGCCCAG
                                                                                                        AACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCGCTGCCCTGAGGAGGC
                                                                                                                                                                AGAACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGCTAATGGA
TGGCTGGGGAACCCTTCACCCTTCTGTGAGATTTTCCATCATCTCAAGTTCTCTATC
                                  GGACTCTGAACCCTCCTGATGACCCCSTATGGCCAACATCAACCCGGCACCAACGCCCAAGGC
                                                                                                                                                    CCTTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCTGATAAACC
                                                                                                                                                                                                                                                                                                                               TTTTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCCATGACTCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                               TTTTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCCATGACTCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTCCACTGCAACCACCCAGAGCCATGGCTCCCCGAGGCTGCATCGTAGCTGTCTTTGCCA
                                                                                                                                                                                                                                                                                                                                                    ACTOTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCAGACGTGTGGAAACTGCA
                                                                                                                                                                                                                                                                                                                                                                         ACCTGATGCTGTGCCAGCCACACAGAGATGTGGGGGACAAGTTCTACGACCCCCTGCAGC
                                                                                                                                                                                                                                                                                                                                                                                     ACCTGATGCTGTGCCAGCCACACAAGAGATGTGGGGACAAGTTCTACGACCCCCTGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2000-237871/20
DB; AAY99380.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ζ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Goddard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        81; 773pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      86.6%;
99.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gurney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 661;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ΑĿ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Smith
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Watanabe CK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Wood
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                          120
                     660
                                         660
                                                               600
                                                                                     600
                                                                                                                               540
                                                                                                                                                                                               420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
720
                                                                                                          540
                                                                                                                                                     480
                                                                                                                                                                           480
                                                                                                                                                                                                                    420
                                                                                                                                                                                                                                          360
                                                                                                                                                                                                                                                                360
                                                                                                                                                                                                                                                                                    300
                                                                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                     240
                                                                                                                                                                                                                                                                                                                                                                           180
                                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                                                                                     120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      . The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
```

```
RESULT 6
AAS21491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                   01-DEC-1999
01-DEC-1999
02-DEC-1999
02-DEC-1999
02-DEC-1999
09-DEC-1999
16-DEC-1999
20-DEC-1999
20-DEC-1999
30-DEC-1999
30-DEC-1999
30-DEC-1999
30-DEC-1999
                                                                                                                                                                                                             11-FEB-2000;
18-FEB-2000;
18-FEB-2000;
                                                                                                                                                                                                                                                                                                                                                                                                     breast; prostate; cervical; tumour necrosis factor-a cartilage; ear; proliferation; glucose; free fatty a adipocyte; A-peptide; factor VIIA; gene therapy; ss.
                                                                            Gerritsen
                                                                                   Baker KP,
                                                                                                                                                                                                                                                                                                                                                                                                                     Human secretory and transmembrane; PRO; mammalian; cancer;
breast; prostate; cervical; tumour necrosis factor-alpha;
                                                                                                                                                                                                                                                                                                                                         01-DEC-2000;
                                                                                                                                                                                                                                                                                                                                                        07-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                        WO200140466-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                             Human cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAS21491 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             24-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENENTECH INC
                                                                           ME, Goddard
                                                                                   Beresini M,
                                                                                                                 2000WO-US07377.
2000WO-US07532.
2000WO-US08439.
2000WO-US13705.
2000WO-US14042.
2000WO-US14941.
2000WO-US32673.
                                                                                                                                                                              9980-US31243
2000WO-US00277
2000WO-US00376
2000WO-US03565
2000WO-US0341
2000WO-US04342
2000WO-US04414
2000WO-US05004
2000WO-US05004
                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                        2000WO-US32678
                                                                                                                                                                                                                                                                           99US-0170262
99WO-US30095
                                                                                                                                                                                                                                                                    99WO-US30911
                                                                                                                                                                                                                                                                                           99WO-US28565
                                                                                                                                                                                                                                                                                                  99WO-US28564
                                                                                                                                                                                                                                                                                                          99WO-US28551
                                                                                                                                                                                                                                                                                                                  99WO-US28634
                                                                                                                                                                                                                                                                                                                          99WO-US28301
                                                                                                                                                                                                                                                             9WO-US30999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                           encoding
                                                                 Deforge L, Desnoyers L, Filva
A, Godowski PJ, Gurney AL, Sh
Tumas D, Watanabe CK, Wood WI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           771
                                                                                                                                                                                                                                                                                                                                                                                                                                            for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                            PRO1274
                                                                                                                                                                                                                                                                                                                                                                                                            iree fatty acid;
                                                                                                                                                                                                                                                                                                                                                                                                                                            polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 763
                                                                                  Filvaroff
                                                                          lvaroff E,
Sherwood
                                                                          S
                                                                                  Gao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                720
                                                                                  ξ
```

Isolated, secretory and transmembrane PRO polypeptide used to detect other PRO polypeptides, link bioactive molecules to cells expressing PRO polypeptides, and detect the presence of mammalian tumours e.g. lung, breast, prostate, cervical -

WPI; 2001-408281/43. P-PSDB; AAU12419.

Stewart TA,

Claim

Fig 495; 813pp; English

 $\mathbb{Z}_{\mathbf{x}}^{\mathsf{x}}$ 

```
ASS21244-AAS21518 encode for novel human secretory and transmembrane CC PRO polypeptides. The PRO polypeptides are useful to detect other CC PRO polypeptides, to link bloactive molecules to calls expressing CC PRO polypeptides, to modulate biological activities of cells expressing CC PRO polypeptides, and to detect the presence of mammalian lung, colon, CC breast, prostate, rectal, cervical or liver tumours by comparing PRO CC polypeptide expression in a cell sample to that in a control sample. CC some of the 275 sequences are also useful to stimulate the release of CC tumour necrosis factor-alpha (TNF-alpha) from human blood, the CC proliferation or differentiation of chondrocytes, the proliferation or gene expression in pericyte cells, the release of proteoglycans from CC cartilage, the proliferation of inner ear utricular supporting cells or cartilage, the proliferation of a cytokine from peripheral blood CC monocytes (PBMCs), or the proliferation of endothelial cells. Some of the PRO polypeptides may modulate glucose or free fatty acid uptake by skeletal muscle cells or by adipocytes; or inhibit binding of A-peptide to factor VIIA. The PRO polypeptides can be used in assays to identify CC molecules involved in binding interactions. The polynucleotides encoding transgenic or knock out animals and can be used in gene therapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local S
Matches 761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 771 BP; 169
       601
                                                                                                                                                          481
                                                                                  541
                                                                                                                                                                                             481
                                                                                                                                                                                                                                   421
                                                                                                                                                                                                                                                                      421
                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
CCACAGGTCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTGCTGATGGGGGCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCTTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCTGATAAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCTGATGCTGTGCCAGCCACAAGAGATGTGGGGACAAGTTCTACGACCCCCTGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTCCACTGCAACCACCCAGAGCCATGGCTCCCCGAGGCTGCATCGTAGCTGTCTTTGCCA
                                                                                                                                                AACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCGCTGCCCTGAGGAGGC
                                                                                                                                                                                                                                          ACTGTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCAGACGTGTGGAAACTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGAACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGCTAATGGA
                                                                                                                                                                                                                                                                                                                                                                            AGAACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGCTAATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACTGTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCAGACGTGTGGAAACTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        86.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; 231 C; 195 G; 176 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 661; DB Pred. No. 0; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 22; Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                     660
                                                                                                             600
                                                                          600
                                                                                                                                                  540
                                                                                                                                                                                        540
                                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                480
                                                                                                                                                                                                                                                                                                     420
                                                                                                                                                                                                                                                                                                                                                                                360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        120
                                                                                                                                                                                                                                                                                                                                          420
                                                                                                                                                                                                                                                                                                                                                                                                                   360
                                                                                                                                                                                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

밁 Ş 밁 δÃ В Š В Ş 8 δÃ 밁 δÃ 밁

δÃ 밁 Ş 밁 Q

WPI; 2001-381384/40 P-PSDB; AAB47292.

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KW PROJ PRO1081; PRO1274; PRO10272; proliferation; T-lymphocyte;
KW PROJ199; PRO1556; PRO4401; PRO10268; inhibition; stimulation;
KW infiltration; mononuclear cell; eosinophil; erythema multiforme;
KW polymorphonuclear neutrophil; PWN; antibody; immune-related disorder;
KW systemic lupus erythematosus; rheumatoid arthritis; osteoarthritis;
KW juvenile chronic arthritis; spondyloarthropathy; systemic sclerosis;
KW diopathic infilammatory myopathy Sjogren's syndrome; skin disease;
KW systemic vasculitis; sarcoidosis; autoimmune haemolytic anaemia; asthma;
KW systemic vasculitis; sarcoidosis; autoimmune haemolytic anaemia; asthma;
KW immune-mediated renal disease; demyelination; central nervous system;
KW peripheral nervous system; idiopathic demyelinating polyneuropathy;
KW Guillain-Barre syndrome; hepatobiliary disease; eosinophilic pneumonia;
KW peripheral nervous system; bilary cirrhosis; allergic rhinitis;
KW granulomatous hepatitis; sclerosing cholangitis; food hypersensitivity;
KW Milpple's disease; diopathic plumonary fibrosis; contact dermatitis;
KW psoriasis; atopic dermatitis; hypersensitivity pneumonitis;
KW psoriasis; atopic dermatitis; hypersensitivity pneumonitis;
KW graft rejection; graft-versus-host disease; ss.
                                                                                                         20-JAN-2000;
18-FEB-2000;
03-MAR-2000;
30-MAY-2000;
05-JUN-2000;
24-AUG-2000;
                                                                                                                                                                                      09-DEC-1999;
23-DEC-1999;
11-JAN-2000;
                                                      Fong
                                        Tumas
                                                                                                                                                                                                                                30-NOV-1999;
                                                                                                                                                                                                                                                                                                                WO200140465-A2
                                                                                                                                                                                                                                                                                                                                                    mat_peptide
                                                                                                                                                                                                                                                                                                                                                                               sig_peptide
                                                                               (GETH )
                                                                                                                                                                                                                                                           10-NOV-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Native sequence of PRO1274 cDNA, clone DNA64889-1541.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAC85962 standard; cDNA; 771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     661
                                   7 S,
8 D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGGAGCAAAGCACAGGATCATAATAAATTTATGTACTTTATA 763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGGCTGGGGAACCCTTCACCCTTCTGTGAGATTTTCCATCATCTCTAAGTTCTCTTCTATC
                                                                               GENENTECH INC.
                                       Goddard A, G
Watanabe CK,
                                                                                                       99US-0170262.
99US-0172059.
2000US-0175481.
2000US-0177118.
2000US-0187202.
2000US-0187202.
2000US-0187202.
2000US-0187202.
2000US-0187202.
2000US-0209832.
2000US-0209832.
                                                                                                                                                                                                                                                           2000WO-US30873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                99WO-US28313
                                                                                                                                                                                                                                                                                                                                                    /product= 24..95 /*tag= b 96..353 .
                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers 24..356
                                                                                                                                                                                                                                                                                                                                                                                                           /*tag=
                                       Godowski PJ,
K, Wood WI,
                                                                                                                                                                                                                                                                                                                                                                                                          Ø
                                                                                                                                                                                                                                                                                                                                                                                          "PRO1274 polypeptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ВP
                                                   Grimaldi
                                                   ç,
                                                  ΑĽ,
                                                   Hillan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              720
                                                  즙
```

```
The sequences given in AAC85961-69 encode PRO polypeptides. PRO1081, CC PRO1274 and PRO10272 stimulate the proliferation of T-lymphocytes and CC PRO1199, PRO10268, PRO401 and PRO10268 inhibit the proliferation of CC PRO1199, PRO1556, PRO401 and PRO90268 inhibit the proliferation of CC PRO1199, PRO1754 and PRO90268 inhibit the proliferation of CC mononuclear cells, ecsinophils or polymorphonuclear neutrophils (PMN) into the tissue of a mammal. The PRO EDNA's and antibodies which CC bind to them, are used to treat an immune-related disorder in a CC mammal. Such disorders include systemic lupus crythematosus, rhomatoid arthritis, osteoarthritis, juvenile chronic arthritis, a cspondyloarthropathy, Systemic sclerosis, an idiopathic inflammatory cauchimune haemolytic anaemia, autoimmune thrombocytopaenia, thyroiditis, CC diabetes mellitus, immune-mediated renal disease, a demyelinating classes of the central or peripheral nervous system, idiopathic classes of the central or peripheral nervous system, idiopathic classes of infectious or autoimmune chronic active hepatitis, primary biliary crimmatory bowel disease, gulten-sensitive hepatitis, primary biliary crimmatory bowel disease, gulten-sensitive enteropathy, whipple's disease, an autoimmune or immune-mediated skin disease, a bullous skin callergic disease, asthma, allergic rhinitis, atopic dermatitis, food hypersensitivity, urticaria, an immunologic disease of the lung, censonitis, a transplantation associated disease, graft rejection or crimman contact dermatitis, hypersensitivity graft-versus-host disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Simi
Matches 761;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Isolated
disorder
                                481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                               421
                                                                                                                           421
                                                                                                                                                                          361
                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
AACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCGCTGCCCTGAGGAGGC
                                                                                                                                                                                                                                                                                                                                                       CCTTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCTGATAAACC 300
                                                                                             AGAACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGCTAATGGA
                                                                                                                                                                                                                                                                                  AGAACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGCTAATGGA 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCTGATGCTGTGCCAGCCACACAAGAGATGTGGGGACAAGTTCTACGACCCCCTGCAGC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTTTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCCAGTGGCCCCCCATGACTCCTT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTTTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCATGACTCCTT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTCCACTGCAACCCAGAGCCATGGCTCCCCGAGGCTGCATCGTAGCTGTCTTTGCCA 60
                                                                                                                                                                CTCCACTGCAACCACCCAGAGCCATGGCTCCCCGAGGCTGCATCGTAGCTGTCTTTGCCA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           771 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fig 3; 124pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRO polypeptide useful e.g. arthritis, asthma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              86.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; 231 C; 195 G; 176 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     asthma,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 661; DB 2
Pred. No. 0;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             for treat or diagnose an immune-related allergy, diabetes or psoriasis -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 771;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                420
                        540
                                                                       480
                                                                                                                                                                                                                                                              360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
```

δÃ

õ 밁 Ş В S β δÃ 밁 γ 밁 δÃ В Ş 밁 Š 밁

The present invention relates to secreted and transmembrane proteins. These proteins and the DNA encoding them may be used as hybridization probes, in chromosome and gene mapping and in the generation of anti-sense RNA and DNA. They may also be used used to generate either transgenic animals or knockout animals which are in turn useful for development and screening of therapeutically useful reagents. The nucleic acids may also be used in gene therapy.

Claim 2;

Fig

81;

787pp; English.

probes,

in

chromosome

gene

proteins

```
REGERATE SECONDARY SECONDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 8
AAF54298
ID AAF5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                            Gao W, wow.
Pan J, Paoni N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20-JUL-1999
26-JUL-1999
01-SEP-1999
29-CCT-1999
30-NOV-1999
02-DEC-1999
16-DEC-1999
05-JAN-2000
06-JAN-2000
                                                                                                                                                                                                                                           Secreted and transmembrane useful as hybridization protherapy -
                                                                                                                                                                                                                                                                                                                              WPI; 2001-071395/08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                18-FEB-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200078961-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (GETH ) GENENTECH INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          28-DEC-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Secreted; transmembrane; gene therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA encoding protein of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   02-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAF54298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAF54298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ΚP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGGCTGGGGAACCCTTCACCCTTCTGTGAGATTTTCCATCATCTAAGTTCTCTTCTATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGACTCTGAACCCTGATGACCCSTATGGCCAACATCAACCCGGCACCACCCCAAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCACAGGTCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTGCTGATGGGGGCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCAGCTGCCCTGAGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGGCTGGGGAACCCTTCACCCTTCTGTGAGATTTTCCATCATCTCAAGTTCTCTTCTATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGACTCTGAACCCTCCTGATGACCCCTATGGCCAACATCAACCCGGCACCACCCCAAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCACAGGTCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTGCTGATGGGGGCCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                      Goddard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                        Botstein D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99WO-US30095.
2000WO-US00219.
2000WO-US00376.
                                                                                                                                                                                                                                                                                                                                                                     . NF, Roy
Williams
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000WO-US04342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99US-0145698.
99WO-US20111.
99US-0162506.
99WO-US28313.
99WO-US28551.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99US-0141037
99US-0144758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                 Godowski
                                                                                                                                                                                                                                                                                                                                                                          P M
                                                                                                                                                                                                                                                                                                                                                                     Desnoyers L, Eaton DL,
owski PJ, Grimaldi CJ,
MA, Smith V, Stewart TA
PM, Wood WI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     invention
                                                                                                                                                                                                                                                    and nucleic acids designated chromosome and gene mapping an
                                                                                                                                                                                                                                                                                                                                                                                          Stewart TA,
                                                                                                                                                                                                                                                                                                                                                                                          Ferrara N, Fong (
Gurney AL, Hillan
A, Tumas D;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        540
                                                                                                                                                                                                                                                                                                                                                                                                               Z
```

(BSG)

```
RESULT 9
                                                                                                      Š
DXXXXXXXXXXXX
                                                                                                                  B
                                                                                                                            Š
                                                                                                                                         В
                                                                                                                                                    δÃ
                                                                                                                                                                 В
                                                                                                                                                                                       밁
                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                               밁
                                                                                                                                                                                                                        γ
                                                                                                                                                                                                                                                             맑
                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                        g
                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                            õ
                                                                                                                                                                                                                                                                                                                                                                   ô
                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                      Matches
Homo sapiens
                  Human;
                                                            AAA08111 standard; DNA;
           detection;
                             Human
                                        22-JUN-2000
                                                    AAA08111;
                                                                                            721
                                                                                                       721
                                                                                                                   661
                                                                                                                             661
                                                                                                                                         601
                                                                                                                                                    601
                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                 541
                                                                                                                                                                                       481
                                                                                                                                                                            541
                                                                                                                                                                                                   481
                                                                                                                                                                                                               421
                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                           Local
                                                                                          CAGGAGCAAAGCACAGGATCATAATAAATTTATGTACTTTATA
                                                                                                CAGGAGCAAAGCACAGGATCATAATAAATTTATGTACTTTATA 763
                                                                                                                CCACAGGTCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTGCTGATGGGGGGCCCAG
                                                                                                                                                                                                                                                                                CCTTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCTGATAAACC
                                                                                                                                                                                                                                                                                                                                                                            CTCCACTGCAACCACCCAGAGCCATGGCTCCCGAGGCTGCATCGTAGCTATCTTTGCCA
                                                                                                                                       GGACTCTGAACCCTCCTGATGACCCSTATGGCCAACATCAACCCGGCACCACCCCAAGGC
                                                                                                                                                                                     AACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCGCTGCCCTGAGGAGGC
                                                                                                                                                                                                            ACTGTTGCTATGATGATGACCGTCGTGCCCTTGGCCAGGACCCAGACGTGTGGAAACTGCA
                                                                                                                                                                                                                                                                                                                                                     ACATCAGGGGAACGATGACTCCTGGATICTCCTTGCTGGGTGGGCCTGGAGAAAGAGGCT
                                                                                                                                                                                                                                                                 AGAACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGCTAATGGA
                                                                                                                                                                                                                                                                                                                              ACCTGATGCTGTGCCAGCCACACAAGAGATGTGGGGACAAGTTCTACGACCCCCTGCAGC
                                                                                                                                                                                                                                   AGAACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGCTAATGGA
          bladder specific gene; BSG;
ion; metastasis; cytostatic;
                                                                                                                                                                                                                                                                                                                                                                                                      761;
                                                                                                                                                                                                                                                                                                                                                                                                           Similarity.
                                                                                                                                                                                                                                                                                                                                                                                                                              771
                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                            ВP;
                            specific
                                                                                                                                                                                                                                                                                                                                                                                                                            169
                                      entry)
                                                                                                                                                                                                                                                                                                                                                                                                          86.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                            gene
                                                              914
                                                                                                                                                                                                                                                                                                                                                                                                                             231
                            22638 clone 819141H
                                                              ₽P.
                                                                                                                                                                                                                                                                                                                                                                                                                            Ç
                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                           Score 661;
Pred. No. 0;
                                                                                                                                                                                                                                                                                                                                                                                                                            195
                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
           bladder
ds.
                                                                                                                                                                                                                                                                                                                                                                                                                            G; 176 T;
                                                                                                                                                                                                                                                                                                                                                                                                                DB
               cancer; diagnosis;
                                                                                                                                                                                                                                                                                                                                                                                                                22;
                                                                                                                                                                                                                                                                                                                                                                                                                            0 other;
                                                                                                                                                                                                                                                                                                                                                                                                     <u>ب</u>
                           SEQ
                                                                                          763
                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                           ID NO:1.
                                                                                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                   660
                                                                                                                                                                          600
                                                                                                                                                                                                                                                                                                                                                                  120
                                                                                                                                       660
                                                                                                                                                              600
                                                                                                                                                                                     540
                                                                                                                                                                                                 540
                                                                                                                                                                                                             480
                                                                                                                                                                                                                        480
                                                                                                                                                                                                                                   420
                                                                                                                                                                                                                                               420
                                                                                                                                                                                                                                                          360
                                                                                                                                                                                                                                                                     360
                                                                                                                                                                                                                                                                                 300
                                                                                                                                                                                                                                                                                             300
                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                      120
                                                                                                                                                                                                                                                                                                                                                                             60
                                                                                                                                                                                                                                                                                                                                                                                         60
                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                                                                     0
  δÃ
              밁
                         δÃ
                                    밁
                                                õ
                                                                      Ş
                                                                                   밁
                                                                                             õ
                                                            밁
                                                                                                          엉
                                                                                                                    Š
                                                                                                                                 밁
                                                                                                                                           οy
                                                                                                                                                       밁
                                                                                                                                                                  δÃ
                                                                                                                                                                                                       421
```

```
CC staging and monitoring the onset of metastasis or a change in stage CC of bladder cancer, by measuring bladder specific gene (BSG) levels in CC cells, tissues or body fluids. An increase in BSG levels compared to normal human control is associated with the presence or progression of CC bladder cancer, a decrease is associated with cancer regression of bladder cancer, a decrease is associated with cancer regression of CC method comprising measuring BSG is useful for detecting, diagnosing metastasis, staging and monitoring the onset of metastasis or a change in stage of bladder cancer. An antibody against BSG (I) labeled with CC paramagnetic ions or an isotope is useful for inaging bladder cancer and (I), especially conjugated to a cytotoxic agent is useful for treating bladder cancer which has metastasised and the bladder cancer which h
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 914 BP; 193 A; 265 C; 237 G; 218 T; 1 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 6; Page 25-26; 31pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Detecting, diagnosing metastasis, staging, monitoring, imaging treating bladder cancer, involves measuring bladder specific ge
                                                                                           393
                                                                                                                                             361
                                                                                                                                                                                               333
                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                         273
                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                               213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Salceda S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      02-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             09-MAR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 levels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (DIAD-) DIADEXUS LLC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO200012761-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ű
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGAACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGCTAATGGA
                                                                                                                                                                                                                                                                                              CCTTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCTGATAAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCTGATGCTGTGCCAGCCACACAAGAGATGTGGGGACAAGTTCTACGACCCCCTGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                   ACTGTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCAGACGTGTGGGAAACTGCA
                                                                                                                                                                                                                                                                                                                                                                                                          ACTGTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCAGACGTGTGGAAACTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCTGATGCTGTGCCAGCCACACAGAGATGTGGGGGACAAGTTCTACGACCCCCTGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000-256658/22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                761;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         in cells or body fluids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sun Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98US-0098825
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99WO-US20003.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    86.6%;
99.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Recipon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 661; DB Pred. No. 0; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ή,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cafferkey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ν,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               914;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                        420
                                                                                                                                                                                                                                                                                                                                                     300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60
                                                                                   452
                                                                                                                                                                                            392
                                                                                                                                                                                                                                              360
                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       152
                                                                                                                                                                                                                                                                                                332
                                                                                                                                                                                                                                                                                                                                                                                                          272
```

0,

480

```
26-JUN-1998;
31-JUL-1998;
01-OCT-1998;
11-DEC-1998;
                                                                                                                     Lal P, T
Akerblom
                                                                                                                                                                                                                                                                                          Human; signal peptide-containing protein; HSPP; diagnosis; cancer; inflammation; cardiovascular disease; anticancer; anti-inflammatory; antimicrobial; nootropic; neuroprotective; cardiovascular; hepatotropic; antiasthmatic; gene therapy; cell proliferation; neurological disorder; reproductive disorder; developmental disorder; arteriosclerosis; cirrhosis; psoriasis; acquired immune deficiency syndrome; anaemia; asthma; Crohn's disease; infection; Alzheimer's disease; schizophrenia; Parkinson's disease; Huntington's disease; ovulatory defect;
                                             New human signal peptide-containing proteins useful in treatment, prevention and diagnosis of e.g. cancer, inflammation and cardiovascular disease
                                                                                 WPI; 2000-160673/14.
P-PSDB; AAY87273.
                                                                                                                                                 (INCY-) INCYTE PHARM INC.
                                                                                                                                                                                                                25-JUN-1999;
                                                                                                                                                                                                                                  06-JAN-2000
                                                                                                                                                                                                                                                    WO200000610-A2
                                                                                                                                                                                                                                                                     Homo sapiens.
                                                                                                                                                                                                                                                                                      muscular dystrophy;
                                                                                                                                                                                                                                                                                                                                                                               Human signal
                                                                                                                                                                                                                                                                                                                                                                                                 11-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                     AA298158 standard; cDNA; 748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGGCTGGGGAACCCTTCACCCTTCTGTGAGATTTTCCATCATCTCAAGTTCTCTATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGACTCTGAACCCTCCTGATGACCCSTATGGCCAACATCAACCCGGCACCACCCCAAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCACAGGTCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTGCTGATGGGGGGCCCAG 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCAGCTGCCCTGAGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCGCTGCCCTGAGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGGCTGGGGAACCCTTCACCCTTCTGTGAGATTTTCCATCATCTCAAGTTCTCTTCTATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tang
om IE,
                                                                                                             Ö
                                                                                                                                                                                                                                                                                                                                                                              peptide containing protein HSPP-50 cDNA SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                 (first
                                                                                                                  IT, Gorgone GA,
Au-Young J, Yue
                                                                                                                                                                 98US-0090762.
98US-0094983.
98US-0102686.
98US-0112129.
                                                                                                                                                                                                               99WO-US14484.
                                                                                                                                                                                                                                                                                      SS.
                                                                                                                                                                                                                                                                                                                                                                                                 entry)
                                                                                                                   H, Patterson
                                                                                                                   Guegler KJ, B
son C, Reddy R,
                                                                                                                   Baughn MR;
R, Hillman
                                                                                                                                                                                                                                                                                                                                                                             NO:184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  540
                                                          Š
                                                                              망
                                                                                               S
                                                                                                                 멍
                                                                                                                                  QΥ
                                                                                                                                                                    ρy
                                                                                                                                                      В
                                                                                                                                                                                          밁
                                                                                                                                                                                                          δõ
                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                 뫄
                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                        용
                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                            Š
```

AAZ98109 to AAZ98242 encode AAY87224 to AAY87357 which represent the human signal peptide-containing proteins HSPP-1 to HSPP-134. HSPPs  $h_{\rm c}$ 

have

밁

CTGAACCCTCCTGATGACCC

Page 281;

327pp;

English

밁 Ş В Ş 밁 Ş 밁 Ş 밁 Ş 밁

```
Š
                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CC reproductive or developmental disorders, (e.g. arteriosclerosis, CC cirrhosis, psoriasis, acquired immune deficiency syndrome, anaemia, CC asthma, Crohn's disease, microbial or other infections, congestive or CC dischaemic heart disease, Alzheimer's, Parkinson's or Huntington's CC diseases, Schizophrenia, ovulatory defects, muscular dystrophy). HSPP CC nucleic acids can be used for the recombinant production of HSPP, for CC detecting HSPP in standard hybridisation and amplification assays (for CC diagnosis and monitoring), in gene therapy, as antisease, cor genetic variations, and for chromosomal mapping. HSPP are also used to craise specific antibodies (Ab) and to screen for agonists and cor monitor, HSPP-related diseases (in usual immunoassays), as therapeutic antagonists, in competitive drug screens, and for purification of HSPP from natural competitive drug screens, and for purification of HSPP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       neuroprotective, cardiovascular and antiasthmatic activities, and can be used in gene therapy. HSPPs can be used to treat or prevent disorders associated with decreased activity or function of HSPP. Antagonists of HSPP are used to treat or prevent disorders associated with increased activity or function of HSPP. Such diseases include cell proliferation (including cancer), inflammation, cardiovascular, neurological,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                anticancer, anti-inflammatory, antimicrobial, nootropic, hepatotropic,
                                                       541
                                                                                          546
                                                                                                                              481
                                                                                                                                                                   486
                                                                                                                                                                                                     421
                                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                 366
                                                                                                                                                                                                                                                                                                                                                                                          306
                                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6
CTGAACCCTCCTGATGACCC
                                                                       GGTCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTGCTGATGGGGGGCCCAGGGACT
                                                                                                                       CCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCGCTGCCCTGAGGAGGAGGCCCACA
                                                                                                                                                                                                AGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCCTGATAAACCAGAAC
                                                                                                                                                                                                                                      TGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCAGACGTGTGGGAAACTGCACCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATGCTGTGCCAGCCACACAAGAGATGTGGGGGACAAGTTCTACGACCCCCTGCAGCACTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATGCTGTGCCAGCCACACAAGAGATGTGGGGACAAGTTCTACGACCCCCTGCAGCACTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGCAACCACCCAGAGCCATGGCTCCCCGAGGCTGCATCGTAGCTGTCTTTGCCATTTTC
                                                   GGTCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTGCTGATGGGGGCCCCAGGGACT
                                                                                                                                                                                                                                                                                                                                                                                                                           AGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCTGATAAACCAGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCAGACGTGTGGAAACTGCACCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCATGACTCCTTACCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  al Similarity
619; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B₽;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               74.68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         227
                 625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ü
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 569; DB 21
Pred. No. 5e-275;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   169 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                      605
                                                   600
                                                                                                                                                           545
                                                                                                                                                                                                                                                                                                           425
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 125
                                                                                                                         540
                                                                                                                                                                                                  480
                                                                                                                                                                                                                                    485
                                                                                                                                                                                                                                                                         420
                                                                                                                                                                                                                                                                                                                                                360
                                                                                                                                                                                                                                                                                                                                                                                    365
                                                                                                                                                                                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                                                                                                                                                             305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
```

```
RESULT 11
AAXO1685/c
ID AAXO16
XX AAXO16
XX AAXO16
XX Urinar
XX Urinar
XX BL172;
XX Homo s
XX W09855
XX IO-DEC
XX O5-JUN
XX O5-JUN
XX O5-JUN
XX PA (ABBO
XX WEW P
PT ROBER:
XX WEW P
PT Indic.
XX NEW P
PT Indic.
XX IT ACT
XX Calim
XX Seque
CC targe
CC are u
CC iden t
CC seque
CC recon
CC seque
CC seque
CC seque
CC recon
CC seque
                                        Qy
                                                                                        밁
                                                                                                                            Ş
                                                                                                                                                                       밁
                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                         ş
                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequences AAX01683-85 represent overlapping clones specific for urinary tract tissue library BL172. The BL172 polynucleotides are used to detect target BL172 polynucleotides and BL172 mRNA and the BL172 polypeptides are used to detect BL172 antijens/antibodies in a test sample. The identification of certain markers in these methods are indicative of the presence of urinary tract disease, especially cancer. Additionally, the polypeptides are used to detect antibodies that bind specifically to a BL172 epitope derived from a BL172 polypeptide. Host cells containing a recombinant expression vector comprising the BL172 polynucleotide sequences are used to produce the polypeptides containing BL172 epitopes. The methods aid in diagnosis, detection, staging, monitoring, prognostication, in vivo imaging, prevention and treatment of diseases or conditions associated with BL172, especially urinary tract cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 1; Page 89; 114pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New purified polynucleotide BL172 derivatives and encoded polypeptides - useful in the identification of markers, w indicative of urinary tract diseases or conditions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Billing-medel PA,
Gordon J, Granada
Roberts-Rapp L, 1
                                                                                                                                                                                                              406
                                                                                                                                                                                                                                            05-JUN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        05-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO9855656-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Urinary tract tissue library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAX01685 standard; DNA;
                                                                                                                              466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (ABBO ) ABBOTT LAB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21-APR-1999
                                                                                                                                                                                                                                                                                                                                                         Local
                   CTGCCCTGAGGAGGCCCACAGGTCCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTG
                                                                                                  CTGGAGAAAGAGGCTGGTGTTACCTGAGATCTGGGATGCTGAGTGGCTGTTTTGGGGGCCCA 465
                                                                                                                                                              CTGGAGAAAGAGGCTGGTGTTACCTGAGATCTGGGATGCTGAGTGGCTGTTTGGGGGCCA
                                                                             GAGAAACACACTCAACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1999-045802/04.
                                                                                                                                                                                                                                                                                                                                      416;
                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Granadosen, Hodges
                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                   BP; 99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             97us-0869579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tract; marker; cancer; recombinant; human; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98WO-US11693.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cohen M,
                                                                                                                                                                                                                                                                                                                                                                                                               A; 108 C; 117 G;
                                                                                                                                                                                                                                                                                                                                                   48.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          417 BP
                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                Score 366; DB 20;
Pred. No. 2.8e-173;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Colpitts TL, Fries SC, Klass MR, Stroupe SD, Yu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BL172 gene specific cDNA clone g2178680
                                                                                                                                                                                                                                                                                                                                                                                                             93 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Friedman PN;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kratochvil JD;
                                                                                                                                                                                                                                                                                                                                                                      Length 417;
                                                                                                                                                                                                                                                                                                                             0,
                                                                                                                                                                                                                                                                                                                           Gaps
178
                                                                                                                      525
                                                                                                                                                                 298
                                                                               238
                                                                                                                                                                                                                                                                                                                             0
```

밁

162

TTCTACGACCCCCTGCAGCACTGTTGCTATGATGATGCCGTCGTGGCCCTTGGCCAGGACC TTCTACGACCCCTGCAGCACTGTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACC

Query Match
Best Local Similarity
Matches 236; Conserv

Conservative

0,

Mismatches

Indels

0,

Gaps

0;

60 221 16-108; 0;

Score 236; Pred. No.

Sequence

236

BP; 49

A; 69 C; 30.9%;

62 G; 56 T; 0 other;

```
RESULT 12
AAX01684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                         Sequences AAX01683-85 represent overlapping clones specific for urinary tract tissue library BL172. The BL172 polynucleotides are used to detect target BL172 polynucleotides and BL172 mRNA and the BL172 polypeptides are used to detect BL172 antigens/antibodies in a test sample. The identification of certain markers in these methods are indicative of the presence of urinary tract disease, especially cancer. Additionally, the polypeptides are used to detect antibodies that bind specifically to a BL172 epitope derived from a BL172 polypeptide. Host cells containing a recombinant expression vector comprising the BL172 polynucleotide sequences are used to produce the polypeptides containing BL172 epitopes. The methods aid in diagnosis, detection, staging, monitoring, prognostication, in vivo imaging, prevention and treatment of diseases or conditions associated with BL172, especially urinary tract cancer.
                                                                                                                                                                                                                                                                                     New purified polynucleotide BL172 derivatives and encoded polypeptides - useful in the identification of markers, which indicative of urinary tract diseases or conditions
                                                                                                                                                                                                                                                        Claim 1; Page 89; 114pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                           Billing-medel PA, Coh
Gordon J, Granadosen,
                                                                                                                                                                                                                                                                                                                                                           WPI; 1999-045802/04.
                                                                                                                                                                                                                                                                                                                                                                                          Roberts-Rapp L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           05-JUN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            05-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO9855656-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BL172; urinary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Urinary tract tissue library BL172 gene specific cDNA clone 2624118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAX01684 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           (ABBO ) ABBOTT LAB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAX01684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                586 CTGATGGGGGCCCAGGGACTCTGAACCCCTCCTGATGACCCCSTATGGCCAACATCAACCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAGTTCTCTTCTATCCAGGAGCAAAGCACAGGATCATAATAAATTTATGTACTTTAT 762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCACCACCAAGGCTGGCTGGGGAACCCTTCACCCTTCTGTGAGATTTTCCATCATCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCACCACCCCAAGGCTGGCTGGGGAACCCCTTCACCCTTCTGTGAGATTTTCCATCATCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAGTTCTCTTCTATCCAGGAGCAAAGCACAGGATCATAATAAATTTATGTACTTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTGATGGGGGCCCAGGGACTCTGAACCCCTCCTGATGACCCCTATGGCCAACATCAACCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tract; marker; cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            98WO-US11693
                                                                                                                                                                                                                                                                                                                                                                                          adosen, Hodges
Russell JC, S
                                                                                                                                                                                                                                                                                                                                                                                                                          Cohen M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              236
                                                                                                                                                                                                                                                                                                                                                                                      Colpitts TL,
ges SC, Klass
, Stroupe SD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          recombinant;
                                                                                                                                                                                                                                                                                                                                                                                    MR,
Yu
                                                                                                                                                                                                                                                                                                                                                                                                                       Friedman
                                                                                                                                                                                                                                                                                                                                                                                                       Kratochvil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             645
```

```
밁
                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 13
AAX01683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                         Matches
                                                                      Query Match
Best Local
                                                                                                                               Sequences AAX01683-85 represent overlapping clones specific for urinary tract tissue library BL172. The BL172 polynucleotides are used to detect target BL172 polynucleotides and BL172 mRNA and the BL172 polypeptides are used to detect BL172 antiyens/antibodies in a test sample. The identification of certain markers in these methods are indicative of the presence of urinary tract disease, especially cancer. Additionally, the polypeptides are used to detect antibodies that bind specifically to a BL172 epitope derived from a BL172 polypeptide. Host cells containing a recombinant expression vector comprising the BL172 polynucleotide sequences are used to produce the polypeptides containing BL172 epitopes. The methods aid in diagnosis, detection, staging, monitoring, prognostication, in vivo imaging, prevention and treatment of diseases or conditions associated with BL172, especially urinary tract cancer.
                                                                                                                                                                                                                                                                                                                                                             New purified polynucleotide BL172 derivatives and encoded polypeptides - useful in the identification of markers, which are indicative of urinary tract diseases or conditions
                                                                                                                                                                                                                                                                                                                                                                                                                                                Billing-medel PA, Cohen M, Co
Gordon J, Granadosen, Hodges
Roberts-Rapp L, Russell JC, (
                                                                                                             Sequence 196 BP; 38
                                                                                                                                                                                                                                                                                                                                     Claim 1; Page 89; 114pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 1999-045802/04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAX01683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   05-JUN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               05-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO9855656-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BL172; urinary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Urinary tract tissue library BL172 gene specific cDNA clone 1554838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (ABBO ) ABBOTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAX01683 standard; DNA; 196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  222
                       1 CTCCACTGCAACCACCCAGAGCCATGGCTCCCCGAGGCTGCATCGTAGCTGTCTTTGCCA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
CAGACGTGTGGAAACTGCACCTTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTC 281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAGACGTGTGGAAACTGCACCTTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATGGTGAAGCTGATAAACCAGAACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGT 341
                                                                     Similarity
                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LAB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   97us-0869579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98WO-US11693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tract; marker; cancer; recombinant; human;
                                                  25.7%; 5c.
100.0%; Pr
                                                                                                               A
                                                                                                             70 C; 44 G;
                                                     Score 196; DB; Pred. No. 4.4
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                              Colpitts TL, ges SC, Klass, Stroupe SD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ВP
                                                                                                            44 T; 0 other;
                                                     4.4e-88;
hes 0;
                                                                                  DB 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                Friedman PN;
MR, Kratochvi
Yu H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Kratochv11
H;
                                                                              Length 196;
                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SS
                                                      0
                                                  Gaps
 60
                                                     0;
```

```
The invention relates to isolated polynucleotide (I) and copypaptide (II) sequences. (I) is useful as hybridisation probes, copypaptide (II) sequences. (I) is useful as hybridisation probes, copypaptide (II) sequences, and in reaction (PCR) primers, oligomers, and for chromosome and gene mapping, and in recombinant production of (II) The polynucleotides are also used in diagnostics as expressed sequence tags for identifying expressed genes. (I) is useful in gene therapy techniques to restore normal activity of (II) or to treat disease states involving (II). (II) is useful for generating antibodies against it, detecting or quantitating a polypeptide in tissue, as molecular weight markers and as a food supplement. (II) and its binding partners are useful in medical imaging of sites expressing (II). (I) and (II) are useful for treating the polypeptide and polynucleotide sequences have applications in a cid sorders involving aberrant protein expression or biological activity. The polypeptide and polynucleotide sequences have applications in a cid diagnostics, forensics, gene mapping, identification of mutations are responsible for genetic disorders or other traits to assess blodiversity and to produce other types of data and products dependent on DNA and camino acid sequences. AAS64197-AAS94564 represent novel human and associated and polynucleotide sequences of the invention.

Note: The sequence data for this patent did not appear in the printed at fraction, but was obtained in electronic format directly from WIPO at free ways.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                                                                                                                                                             Claim 1; SEQ ID No 27860; 103pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutation responsible for genetic disorders or other traits and to assess
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Drmanac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        31-MAR-2000;
23-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11-OCT-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO200175067-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human; chromosome mapping; gene mapping; gene therapy; forensic;
food supplement; medical imaging; diagnostic; genetic disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA encoding novel human diagnostic protein #27860.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               P-PSDB; ABG27869.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (HYSE-) HYSEQ INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-MAR-2001; 2001WO-US08631.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAS92056
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAS92056 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2001-639362/73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACTGTTGCTATGATGA 196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACTGTTGCTATGATGA 196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTTTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCCATGACTCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTTTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCATGACTCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    짬,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Liu C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000US-0649167.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2000US-0540217.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                YT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mutations
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
```

ftp.wipo.int/pub/published\_pct\_sequences

```
The invention provides polynucleotide sequences from urinary tract CC tissue library BL172. The BL172 polynucleotides (AAX01683-87) are used to detect target BL172 polynucleotides and BL172 mRNA and the BL172 CC polypeptides are used to detect BL172 antigens/antibodies in a test comple. The identification of certain markers in these methods are conditionally, the polypeptides are used to detect antibodies that bind compensation in the polypeptides are used to detect antibodies that bind compensation are containing a recombinant expression vector comprising the BL172 CC polypucleotide sequences are used to produce the polypeptides containing compensation, in vivo imaging, prevention and treatment of concern sequences and in diagnosis, detection, staging, concern sequences and in vivo imaging, prevention and treatment of concern sequences and solution with BL172, especially urinary tract concern sequences and solutions associated with BL172, especially urinary tract concern sequences and solutions are present PCR primers used for the amplification of BL172 cDNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 15
AAX01690
                                                                                                                Query Match
Best Local Similarity
Matches 22; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                     Sequence 22 BP; 3 A; 5 C; 6 G; 8 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Example 8; Page 64; 114pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New purified polynucleotide BL172 derivatives and encoded polypeptides - useful in the identification of markers, which are indicative of urinary tract diseases or conditions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Billing-medel PA, Cohen M, Co
Gordon J, Granadosen, Hodges
Roberts-Rapp L, Russell JC, S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BL172; urinary tract; marker; cancer; recombinant; human; PCR primer; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BL172 gene amplifying sense primer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 1999-045802/04.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               05-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO9855656-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1338 BP; 311 A; 350 C; 348 G; 329 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (ABBO ) ABBOTT LAB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAX01690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAX01690 standard; DNA; 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  234 AACTGCACCTTCAGAGTCTGCTT 256
AGGCTGCATCGTAGCTGTCTTT 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        l Similarity 100.0%; I 23; Conservative 0;
                                                                                                       2.9%; Score 22; DB 20; ilarity 100.0%; Pred. No. 0.71; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98WO-US11693.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3.0%; Score 23; DB 23; Length 1338; 100.0%; Pred. No. 0.23; 1ve 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Colpitts TL, Friedman PN;
ges SC, Klass MR, Kratochvil JD;
, Stroupe SD, Yu H;
                                                                                                          0
                                                                                                          Indels
                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                    0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

```
Search completed: November 3, 2002, 01:06:40 Job time : 214 secs
```

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Minimum DB'seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Post-processing: Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Word size :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Searched:
                                                                                                                                                                                                                                      O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                 Score
                                                                                                                                                                                                                                                              Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OLIGO_NUC
Gapop 60.0 , Gapext 60.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13736207 seqs, 6748477542 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-092-297-5
763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            November 3, 2002, 01:06:51; Search time 1689 Seconds
                                   53.7
49.7
48.6
48.0
43.0
43.0
43.7
33.8
33.8
30.8
30.8
30.8
31.7
21.4
20.7
9.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EST:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTCCACTGCAACCACCCAGA.....ATAAATTTATGTACTTATA 763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GenCore version 5.1.3 Copyright (c) 1993 - 2002 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                          gb_est2:*
gb_htc:*
gb_pss:*
gb_gss:*
em_gss_hum:*
em_gss_inv:*
em_gss_pln:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               em_estro:*
em_htc:*
gb_est1:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         em_estov:*
em_estpl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     em_estmu:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    em_estin: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   em_esthum:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               em_estba:*
                                                                                                                                                                                                                                                                 Length DB
                                                                                                        10
9
                                BF911380
AW265432
BF911379
BF913866
BF914311
AI572169
BG951874
                                                                                                                                   BG680336
BG775059
AW265494
AA195677
                                                                                                                                                                                        AA456370
AW991605
AA455904
                                                                                                                                                                                                                                                                IJ
                                                                                                                                                                                                                                                                                                         SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (without alignments)
6097.204 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           27472414
BG775668 602650023
AA456370 Aa14e02.r
AW991605 RC1-BN000
AA455904 Aa14e02.s
BG680336 602629230
BG775059 60265023
AW265494 xq70c11.x
AA195677 zx32h04.s
BF911380 IL2-UT007
AW265432 xq52h11.x
BF911379 IL2-UT007
BF911379 IL2-UT0011
BF91311 IL3-UT011
AF91431 IL3-UT011
AF91431 LA3-UT0011
AF951874 CM4-CT066.x
BG951874 CM4-UT001
AW424984 50784 MAR
                                                                                                                                                                                                                                                             Description
```

45	44	43	42	41	40	39	38	37	36	35	34	w	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18
19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	20	20	20	20	20	20	20	20	20	20	21	21	23
•	•	٠					2.5																				
509	505	483	482	437	. 415	376	374	364	360	360	344	328	281	280	957	679	547	484	458	433	418	398	323	271	654	428	1169
							10								10	9	10	10	10	ဖ	10	12	9	φ	10	9	10
31	573	BG394735	34	Н83681	5	5	BF659363	æ	D68665	AV188034	BF448934	BG091023	BB838433	BB256375	BI768819	BE230496	BF078123	в1336276	C20067	AU163926	BG880839	AZ049839	BB098543	BE230495	BE291082	BB796894	BI490599
AZ953152 2M0218E16	BH225730 1006128A1	3947	7734	681 yv82a(	AW205354 UI-H-BI1-	AI955654 wt36f02.x	59363 maa14e07	AZ098866 RPCI-23-2	D68665 CELK134B4F	V188034	BF448934 nae35d03.	mac13g0	BB838433 BB838433	B256375	BI768819 603057723	9AS6(	BF078123 228383 MA	AR094	0067	U163	1550	GSSBru	860B	5 99AS608 R	291082 601086	796894 BB796894	BI490599 603032264

## ALIGNMENTS

	FEATURES Source	REFERENCE AUTHORS TITLE JOURNAL COMMENT	RESULT 1 BG775668/c LOCUS DEFINITION ACCESSION VERSION KEYWORDS SOURCE ORGANTSM
/Organism="Homo Sapiens" /db_xref="taxon:9606" /clone="IMAGE:4761029" /clone="IMAGE:4761029" /clone="IMAGE:4761029" /clone="IMAGE:4761029" /clone="IMAGE:4761029" /clone="NIH_MGC_40" /tlssue_type="carcinoma, cell line" /lab_host="DH10B (phage-resistant)" /note="Organ: prostate; Vector: poTm7; Site_1: xhoI; /site_2: ECORI; CDNA made by oligo-dT priming. Directionally cloned into EcoRI/XhoI sites using the following 5' adaptor: GGCACGAG(G). Library constructed by	Email: cgapbs-remail.nih.gov Tissue Procurement: DCTD/DTP cDNA Library Preparation: Ling Hong/Rubin Laboratory cDNA Library Preparation: Ling Hong/Rubin Laboratory cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MCC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov plate: LLCM1612 row: n column: 06 High quality sequence start: 16 High quality sequence stop: 806. Location/Qualifiers 1. 828	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.  1 (bases 1 to 828)  NIH-MGC http://mgc.nci.nih.gov/. National Institutes of Health, Mammalian Gene Collection (MGC) Unpublished (1999) Contact: Robert Strausberg, Ph.D.	BG775668 828 bp mRNA linear EST 15-MAY-2001 602650023Tl NIH_MGC_40 Homo sapiens cDNA clone IMAGE:4761029 3', mRNA sequence. BG775668 BG775668 BG775668.1 GI:14045985 EST.

```
ACCESSION
VERSION
KEYWORDS
                                               REFERENCE
AUTHORS
                                                                                                                                                                                                 RESULT 2
AA456370
                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                  δõ
                                                                                                                                                                                                                                                                                                  뮹
                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                        å
                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                           SOURCE
                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BASE COUNT
ORIGIN
                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                          661
                                                                                                                                                                                                                                                                                                   119
                                                                                                                                                                                                                                                                                                                           601
                                                                                                                                                                                                                                                                                                                                                    179
                                                                                                                                                                                                                                                                                                                                                                            541
                                                                                                                                                                                                                                                                                                                                                                                                      239
                                                                                                                                                                                                                                                                                                                                                                                                                            481
                                                                                                                                                                                                                                                                                                                                                                                                                                                      299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                   59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                                                                                                                                                CCACAGGTCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTGCTGATGGGGGCCCAG 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTTTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCCATGACTCCTT 120
                                                                                                                                                                                                                                                              TGGCTGGGGAACCCTTCACCCTTCTGTGAGATT 693
                                                                                                                                                                                                                                                                                               AACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCGCTGCCCTGAGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACATCAGGGGAACGATGACTCCTGGATTCTCCTGCGTGGGCCTGGAGAAAAGAGGCT 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGAACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGCTAATGGA 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCTGATGCTGTGCCAGCCACACAAGAGATGTGGGGGACAAGTTCTACGACCCCCTGCAGC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            630;
                                                                                                                                                                                                                                                 TGGCTGGGGAACCCTTCACCCTTCTGTGAGATT
                                                                                                                                                                                                                                                                                                                        GGACTCTGAACCCTCCTGATGACCCCSTATGGCCAACATCAACCCGGCACCACCCCAAGGC 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACATCAGGGGAACGATGACTCCTGGATTCTCCTTGCGTGGGCCTGGAGAAAGAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTTTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCATGACTCCTT 599
                                                                                                                                                                                                                                                                                                                                                                                                  AACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCAGCTGCCCTGAGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACTGTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCAGACGTGTGGAAACTGCA 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCTGATGCTGTGCCAGCCACACAAGAGATGTGGGGGACAAGTTCTACGACCCCCTGCAGC 539
Hillier, L., Allen, M., Bowles, L., Dubuque, T., Geisel, G., Jost, S., Kucaba, T., Lacy, M., Le, N., Lennon, G., Marra, M., Martin, J., Moore, B., Schellenberg, K., Steptoe, M., Tan, F., Theising, B., White, Y., Wylie, T., Waterston, R. and Wilson, R.
                                                     Eukaryota; Metazoa;
Mammalia; Eutheria;
1 (bases 1 to 412)
                                                                                                                                                   412
aa14e02.rl Soares_NhHMPu_S1 H
5', mRNA sequence.
AA456370
                                                                                                                        AA456370.1
EST.
                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of California, Berkeley) using ZAP-cDNA
(Stratagene) and Superscript II RT (Life
Note: this is a NHLMCC Library."
214 c 234 g 190 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ling Hong in the laboratory of Gerald M. of California, Berkeley) using ZAP-cDNA
                                                                                                                                      GI:2178946
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     53.7%;
                                                                   Chordata;
Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 410; DB 10;
Pred. No. 4.9e-197;
0; Mismatches 2;
                                                                                                                                                                      Homo
                                                                    Craniata; Vertebrata; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                 27
                                                                                                                                                                      sapiens
                                                                                                                                                                                  mRNA
                                                                                                                                                                      cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                 linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                synthesis kit
Technologies).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rubin (University
                                                                                Euteleostomi;
                                                                                                                                                                      EST 06-JUN-1997
IMAGE:813242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                           540
                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    300
                                                                                                                                                                                                                                                                                                  60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ٠.
   RESULT 3
AW991605
LOCUS
DEFINITION
```

```
TITLE
JOURNAL
COMMENT
밁
                           Š
                                                           밁
                                                                                     δÃ
                                                                                                                       밁
                                                                                                                                                 Š
                                                                                                                                                                                   밁
                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity Matches 379; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
                              467
                                                                                          407
                                                                                                                                                                                                                                                154
394
                                                           334
                                                                                                                         274
                                                                                                                                                    347
                                                                                                                                                                                   214
                                                                                                                                                                                                                                                                                                                                                                   287
                                                                                                                                                                                                                                                                               227
                                                                                                                                                                                                                                                                                                                                         167
                                                                                                                                                                                                                                                                                                              94
                                                                       TGGAGAAAGAGGCTGGTGTTACCTGAGATCTGGGATGCTGAGTGGCTGTTTGGGGGCCAG
                                                                                                                    CGACCCCCTGCAGCACTGTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCAGAC
                             AGAAACACACACTCAACTG
                                                                                                                                                                                                                                             GTGTGGAAACTGCACCTTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGT
                                                                                                                                                                                                                                                            GTGTGGAAACTGCACCTTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGT 286
                                                                                                                                                                                                                                                                                                         CGACCCCCTGCAGCACTGTTGCTATGATGCCGTCGTCGTGCCCTTGGCCAGGACCCAGAC
AGAAACACACTCAACTG
                                                          TGGAGAAAGAGGCTGGTGTTACCTGAGATCTGGGATGCTGAGTGGCTGTTTGGGGGGCCAG
                                                                                                                                                 Email: est@watson.wust1.eou
This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information. Seq primer: -28ml3 rev2 ET from Amersham
High quality sequence stop: 398.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WashU-Merck EST Project 1997
Unpublished (1997)
Contact: Wilson RK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Washington University School of Medicine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                88
                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note-"organ: mixed (see below); Vector: pT7T3D-Pac (Pharmacia) with a modified polylinker; Site_1: Not I; Ste_2: Eco RI; Equal amounts of plasmid DNA from three normalized libraries (melanocyte 2NbHM, pregnant uterus NbHPU, and fetal heart NbHH19W) were mixed, and ss circles were made in vitro. Following HAP purification, this DNA was used as tracer in a subtractive hybridization reaction. The driver was PCR-amplified cDNAs from pools of 5,000 clones made from the same 3 libraries. The pools consisted of I.M.A.G. E. clones 260232-265223, 340488-345479, and 484488-489479.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
/db.xref="GDB:6044152"
/db.xref="taxon:9606"
/clone="IMAGE:813242"
/clone=11b="Soares_NhHMPu_S1"
/tissue_type="Pooled human melapregnant uterus"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ςu
                                                                                                                                                                                                                                                                                                                                                                                                                                                 49.7%;
                             485
412
                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 379; DB 9; L
Pred. No. 2.4e-181;
                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                melanocyte,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Louis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 412;
                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                fetal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     contact the
                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                heart,
                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                     466
                                                                                                                     333
                                                                                                                                                   406
                                                                                                                                                                                273
                                                                                                                                                                                                             346
                                                                                                                                                                                                                                             213
                                                                                                                                                                                                                                                                                                         153
                                                                                                                                                                                                                                                                                                                                      226
                                                                                                                                                                                                                                                                                                                                                                                                                                  0
```

AW991605 RC1-EN0005-030500-015-g07 BN0005 Homo

mRNA

sapiens

linear ens cDNA,

```
δÃ
                                                                                밁
                                                                                                               Š
                                                                                                                                                        밁
                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                 Hest Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                  138
       318
                   444 CTGAGTGGCTGTTTGGGGGCCAGAGAAACACACACTCAACTGCCCACTTCATTCTGTGAG 503
                                                                                                                                                                                                                                                                                                 258
                                                                                                                     384
                                                                                                                                                          198
                                                                                                                                                                                             324
                                                                                                                                                                                                                                                                     264
CTGAGTGGCTGTTTGGGGGCCAGAGAAACACACACTCAACTGCCCACTTCATTCTGTGAC
                                                                                                                                                                                   TCGGATGACAGGCTTTGTCGCAGTGTCAGCTAATGGAACATCAGGGGAACGATGACTCCT 383
                                                                                                                                                                                                                      GGATTCTCCTTGCGTGAGCCTGGAGAAAGAGGCTGGTGTACCTGAGATCTGGGATG
                                                                                           GGATTCTCCTTCCTGGGTGGGCCTGGAGAAAGAGGCTGGTGTTACCTGAGATCTGGGATG 443
                                                                                                                                                421;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 533)

Dias Neto, E., Garcia Correa, R., Verjovski-Almeida, S., Briones, M.R., Nagai, M.A., da Silva, W. Jr., Zago, M.A., Bordin, S., Costa, F.F., Ragai, M.A., da Silva, W. Jr., Xago, M.A., Baia, G.S., Simpson, D.H., Brunstein, A., Geoliveira, P.S., Bucher, P., Jongeneel, C.V., O'Hare, M.J., Soares, F., Brentani, R.R., Reis, L.F., de Souza, S.J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            This sequence was derived from the FAPESP/LICR Human Cancer Genome Project. This entry can be seen in the following URL (http://www.ludwig.org.br/scripts/gethtml2.pl?tl=&t2=RC1-BN0005-030 500-015-g07&t3=2000-05-03&t4=1)  
Seq primer: puc 18 forward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 andar, 01509-010,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Shotgun sequencing of the human transcriptome with ORF expressed sequence tags
                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Email: asimpson@ludwig.org.br
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tel: +55-11-2704922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Simpson A.J.G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AW991605
AW991605.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  numan.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         quality sequence start: 16 quality sequence stop: 533.
                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 +55-11-2707001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Natl. Acad.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   note-"Organ: breast_normal; Vector: puc18; Site_1: Sma1; Site_2: Sma1, A mini-library was made by cloning products derived from ORESTES PCR (U.S. Letters Patent application No. 196,716 - Ludwig Institute for Cancer Research) profiles into the pUC-18 vector. Reverse transcription of tissue mRNA and cDNA amplification were performed under low stringency conditions."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone_lib="BN0005"
/dev_stage="Adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GI:8251660
                                                                                                                                                                                                                                                                                                                                                                                                  48.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       on/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sci. U.S.A. 97 (7), 3491-3496 (2000)
                                                                                                                                                                                                                                                                                                                                                                           Score 371; DB 9;
Pred. No. 2.9e-177;
0; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                               1;
                                                                                                                                                                                                                                                                                                                                                                                                              Length 533;
                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sao
                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Paulo-SP
                                                                                                                                                                                                                                                                                                                                                                         Gaps
377
                                                                        317
                                                                                                                                                257
                                                                                                                                                                                                                                                                                                                                                                           0,
```

밁 Š

Indels

0;

Gaps

0

Best Local Similarity 99.1 Matches 416; Conservative

```
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 4
AA455904/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           624 CC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CC 499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGGACAGCATGAGATGCGTGTGCTGATGGGGGGCCCCAGGGACTCTGAACCCTCCTGATGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGGACAGCATGAGATGCGTGTGCTGATGGGGGGCCCAGGGACTCTGAACCCTCCTGATGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Email: est@watson.wustl.edu
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
Seq primer: -4.nml3 fwd. ET from Amersham
High quality sequence stop: 400.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hillier,L., Allen,M., Bowles,L., Dubuque,T., Geisel,G., Jost,S., Kucaba,T., Lacy,M., Le,N., Lennon,G., Marra,M., Martin,J., Moore,B., Schellenberg,K., Steptoe,M., Tan,F., Theising,B., White,Y., Wylie,T., Waterston,R. and Wilson,R.
WashU-Merck EST Project 1997
Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 aa14e02.s1 Soares_NhHMPu_S1 Homo sapiens cDNA clone IMAGE:813242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Washington University School of Medicine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contact: Wilson RK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AA455904.1 GI:2178680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3', mRNA sequence.
AA455904
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (bases 1 to 417)
                                                                                                        99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         quality sequence stop: 400.
Location/Qualifiers
                                                                                     /note-"Organ: mixed (see below); Vector: pT7T3D-Pac (Pharmacia) with a modified polylinker; Site_1: Not I; Site_2: Eco RI; Equal amounts of plasmid DNA from three normalized libraries (melanocyte 2NbHM, pregnant uterus NbHPU, and fetal heart NbHH19W) were mixed, and ss circles were made in vitro. Pollowing HAP purification, this DNA was used as tracer in a subtractive hybridization reaction. The driver was PCR-amplified cDNAs from pools of 5,000 clones made from the same 3 libraries. The pools consisted of IM.A.G.E. clones 360232-265223, 340488-34549, and 484488-489479."
                                                                                                      ø
                                                                                                                                                                                                                                                                                                                                                                 /clone_llb="Soares_NhHMPu_S1"
/tissue_type="Pooled human melanocyte, fetal heart,
pregnant uterus"
                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
/db_xref="GDB:6044152"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                           /clone="IMAGE:813242"
                                                                                                                                                                                                                                                                                                                                                  _dat_
                  48.0%;
                                                                                                                                                                                                                                                                                                                                              host-"DH10B"
Score 366; DB 9;
Pred. No. 9.4e-175;
D; Mismatches 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Louis, MO 63108
                                   Length 417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EST 06-JUN-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  623
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               563
```

```
VERSION
KEYWORDS
SOURCE
     S
                                                                                                            BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 5
BG680336
                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ,6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                      Query Match
Best Local (
                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                     source
329 TGACAGGCTTTGTCGCAGTGTCAGCTAATGGAACATCAGGGGAACGATGACTCCTGGATT 388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGATGGGGGCCCAGGGACTCTGAACCCTCCTGATGACCCSTATGGCCAACATCAACCCG 645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCACCACCCAAGGCTGGCTGGGGAACCCTTCACCCTTCTGTGAGATTTTCCATCATCTC 705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAGAAACACACTCAACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCCACCCTGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAGTTCTCTTCTATCCAGGAGCAAAGCACAGGATCATAATAAATTTATGTACTTTAT 762
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGCCCTGAGGAGGCCCACAGGTCCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTGCCCTGAGGAGGCCCACAGGTCCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTG '585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           378;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGTTCTCTTCTATCCAGGAGCAAAGCACAGGATCATAATAAATTTATGTACTTTAT 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCACCACCCCAAGGCTGGGGGAACCCTTCACCCTTCTGTGAGATTTTCCATCATCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTGATGGGGGCCCAGGGACTCTGAACCCTCCTGATGACCCCTATGGCCAACATCAACCCG 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAGAAACACACTCAACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCG
                                                                                                                                                                                                                                                                                                                       DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM10614 row: 1 column: 08
High quality sequence stop: 418.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: cgapbs-r@mail.nih.gov
Tissue Procurement: James Cleaver, M.D.
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    602629230F1 NCI_CGAP_Skn4 Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mammalia; Eutheria; Primates; Catarrhini;
1 (bases 1 to 604)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BG680336.1 GI:13911733
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mRNA sequence.
BG680336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished (1999)
                                                        Similarity
                                                                                                                             170
                                       Conservative
                                                                                                                     /tissue_type="squamous cell carcinoma"
/lab_host="blide (TI phage-resistant)
/note="Dorgan: skin; Vector: pcMy-SpORT6; Site_1: NotI;
/note="Organ: skin; Vector: pcMy-SpORT6; Site_1: NotI;
Site_2: SalI; Cloned unidirectionally. Primer: Oligo
Average insert size 1.5kb. Library constructed by Li
Technologies. Note: this is a NCI_CGAP_Library."

171 c 140 g 118 t 5 others
                                                                                                                                                                                                                                           /db_xref="taxon:9606"
/clone="IMAGE:4754071"
/clone_11b="NCI_CGAP_Skn4"
                                                                                                                                                                                                                                                                                                 /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Metazoa;
                                                      43.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chordata; Craniata; Vertebrata; Euteleostomi; Primates; Catarrhini; Hominidae; Homo.
                                    0;
                                  Score 328; DB 10
Pred. No. 2e-155;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        604 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mRNA
                                                                    10;
                                    ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gene Collection (MGC)
                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear EST 01-MAY-2001
A clone IMAGE:4754071 5',
                                                                      604;
                                    0
                                                                                                                                                      Oligo dT.
by Life
                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            238
                                    0;
```

```
KEYWORDS
SOURCE
ORGANISM
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 6
BG775059
                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AUTHORS
                                                                                                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            449
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGATTTTCCATCATCTCAA 707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGGCCAACATCAACCCGGCACCACCCCAAGGCTGGCTGGGAACCCTTCACCCTTCTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGCATGAGATGCGTGTGCTGATGGGGGGCCCAGGGACTCTGAACCCTCCTGATGACCCSTA 628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGAGGCCCACCCTGCCGCTGCCCTGAGGAGGCCCACAGGTCCCCTTCTAGAATTCTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGGCTGTTTGGGGGCCAGAGAAACACACACTCAACTGCCCACTTCATTCTGTGACCTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGATTTTCCATCATCTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGGCCAACATCAACCCGGCACCACCCCAAGGCTGGCGGGGAACCCTTCACCCTTCTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTCCTTCCTGGGTGGGCCTGGAGAAAGAGGCTGGTGTTACCTGAGATCTGGGATGCTGAG 448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGCATGAGATGCGTGTGCTGATGGGGGCCCCAGGGACTCTGAACCCCTCATGACCCCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGAGGCCCACCCTGCCGCTGCCCTGAGGAGGCCCACAGGTCCCCTTCTAGAATTCTGGAC
                                                                                                                                                                                                                                                                                             Email: cgapbs-remail.nih.gov
Tissue Procurement: DCTD/DTP
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can found through the I.M.A.G.E. Consortium/LLNL at:
http://lmage.llnl.gov
Plate: LLCM1612 row: n column: 06
High quality sequence stop: 726.
Location/Qualifiers
726.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 729)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BG775059 729 bp r
602650023F1 NIH_MGC_40 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BG775059.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mRNA sequence.
BG775059
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            numan.
                 169
       /tissue_type="carcinoma, cell line"
/lab_host="DH10B (phage-resistant)"
/note="Organ: prostate; Vector: pOTB7; Site_1: xhoI;
/note: this is a NIH_MGC Library."
/note: this is a NIH_MGC Library."
/note: this is a NIH_MGC Library."
                                                                                                                                                                                                                                               /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                             /clone="IMAGE:4761029"
/clone_lib="NIH_MGC_40"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GI:14045376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chordata; Craniata; Vertebrata; Euteleostomi; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mRNA line
s cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ear EST 15-MAY-2001
IMAGE:4761029 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      193
                                                                                                                                                                                                                                                                                                                                                                                               be
```

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                      SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 7
AW265494
LOCUS
                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                            ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N
                                                                                                           Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-remail.nih.gov
Tissue Procurement: Edward Shillitoe Ph.D., Silvio Gut
Chidchanok Leethanakul D.D.S., Michael Emmert-Buck M.I.
CDNA Library Preparation: David B. Krizman, Ph.D.
CDNA Library Preparation: David B. Krizman, Ph.D.
CDNA Library Preparation: David B. Krizman, Ph.D.
DNA Sequencing by: Washington University Genome Seque
Clone distribution: NCI-CGAP clone distribution infon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAACTGCCCACTTCATTCT 440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACTGTTGCTATGATGATGCCCGTCGTGCCCTTGGCCAGGA-CCCAGACGTGTGGAAACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCTGATGCTGTGCCAGCCACACAAGAGATGTGGGGACAAGTTCTACGACCCCCTGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTTTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCCAGTGGCCCCCCATGACTCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAACTGCCCACTTCATTCT 498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACTGTTGCTATGATGCCGTCGTGCCCTTGGCCAGGACCCCAGACGTGTGGAAACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCTGATGCTGTGCCAGCCACACAAGAGATGTGGGGGACAAGTTCTACGACCCCCTGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTTTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCCATGACTCCTT 61
                                                                                                                                                                                                                                    NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anat
Tumor Gene Index
                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1. (bases 1 to 354)
                                                              Possible reversed clone: polyT Seq primer: -40UP from Gibco.
                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                AW265494.1 GI:6642310
EST.
                                                                                                                                                                                                                                                                                                                                                                                  xq70c11.x1 NCI_CGAP_HN7 mRNA sequence.
                                                                                                   www-bio.llnl.gov/bbrp/image/image.html
                                                                                                                                                                                                                                                                                                                                                                         AW26549
                                                                                                                                                                                                                                                                                                                                                                                                              AW265494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
/organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="IMAGE:2755988"
                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    41.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 318; DB 10;
Pred. No. 2.5e-150;
                                                                                                                                                                                                                                                                                                                                                                                              354
Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                          bp mR
                                                                          not found
                                                                                                                                                                                                                                                                                                                                                                                                          mRNA
                                                                                                                                                                                                                                                                                                                                                                                             cDNA clone IMAGE: 2755988
                                                                                                                                                                                                                                                   Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                           information
                                                                                                                                      Sequencing
                                                                                                                                                                          Gutkind
M.D. Ph.
                                                                                                                                                                                                                                                                                                                                                                                           EST 28-DEC-1999
3E:2755988 3',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                          ..D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       239
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           120
                                                                                                                                      Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      299
                                                                                                                        can be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ۲
```

```
REFERENCE
AUTHORS
                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                              SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 8
AA195677/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
                                                                                                                                                        JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Sim
Matches 313;
                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        750
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          510 GAGGCCCACCCTGCCGCTGCCCTGAGGAGGCCCACAGGTCCCCTTCTAGAATTCTGGACA 569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               450 GGCTGTTTGGGGGCCAGAGAAACACACACTCAACTGCCCACTTCATTCTTTGAGCTGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ဖ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTATGTACTTTATA 763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCATGAGATGCGTGTGCTGATGGGGGCCCAGGGACTCTGAACCCTCCTGATGACCCCSTAT 629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTATGTACTTTATA 322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGCCAACATCAACCCGGCACCACCCCAAGGCTGGCTGGGGAACCCTTCACCCTTCTGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGCTGTTTGGGGGGCCAGAGAACACACACACTCCACCTCCACTTCATTCTGTGACCTGTCT 68
                                                        Contact: Wilson RK
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. I
Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 475)

Hillier, L., Lennon, G., Becker, M., Bonaldo, M.F., Chiapelli, B., Chissoe, S., Dietrich, N., DuBuque, T., Favello, A., Gish, W., Hawkins, M., Hultman, M., Kucaba, T., Lacy, M., Le, M., Mardis, E., Moore, S., Bonaris, M., Parsons, J., Prange, C., Rifkin, L., Rohlfing, T., Schellenberg, K., Soares, M.B., Tan, F., Thierry-Meg, J., Trevaskis, E., Underwood, K., Wohldmann, P., Waterston, R., Wilson, R. and Marra, M. Generation and analysis of 280,000 human expressed sequence tags of 281,44478
          Email: est@watson.wustl.edu
Email: est@watson.wustl.edu
This clone is available royalty-free through LLNL;
This clone is available royalty-free through LLNL;
                                                                                                                                                                                                                                                                                                                                                                                                                                 3', mRNA sequence.
AA195677
                                                                                                                                                                                                                                                                                                                                                                                                                                                        AA195677 475 bp mRNA linear zr32h04.sl Soares_NhHMPu_Sl Homo sapiens cDNA clone
IMAGE Consortium (info@image.linl.go:
Insert Length: 857 Std Error: 0.00
                                                                                                                                                            97044478
                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                              AA195677.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note-"Vector: pAMP10; cDNA made by oligo-dT priming. Non-directionally cloned into the UDG sites of pAMP10 Size-selected on agarose gel, average insert size 50 Primary library; non-amplified. cDNA Library Preparation: David B. Krizman, Ph.D (NCI). Reference: Krizman et al. (1996) Cancer Research 56:5380-5383." a 102 c 78 g 75 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /clone_lib="NCI_CGAP_HN7"
/tissue_type="normal squamous
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                               GI:1785355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     34.5%;
99.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 263; DB 9;
Pred. No. 1.8e-122;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             epithelium,
                                                                                                   Louis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                     ₹
                                                                                                     63108
               ; contact the information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                              IMAGE: 665143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EST 19-MAY-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     749
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mouth"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ър.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

High quality sequence

Sao

Paulo-SP,

```
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 9
BF911380
                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                  SOURCE
                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                    TITLE
                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                       AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             753
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       310 TGTTTGGGGGCCAGAGAAACACACACTCAACTGCCCACTTCATTCTGTGACCTGTCTGAG 251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAACATCAACCCGGCACCACCCCAAGGCTGGCTGGGGAACCCTTCACCCTTCTGTGAGAT 692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGAGATGCGTGTGCTGATGGGGGGCCCAGGGACTCTGAACCCTCCTGATGACCCSTATGGC 632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCCCACCCTGCCGCTGCCCTGAGGAGGCCCACAGGTCCCCTTCTAGAATTCTGGACAGCA 572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGTACTTTA 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGTACTTTA 761
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTTCCATCATCTCAAGTTCTCTTCTATCCAGGAGCAAAGCACAGGATCATAAATTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAACATCAACCCGGCACCCCCAAGGCTGGCTGGGGAACCCTTCACCCTTCTGTGAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGAGATGCGTGTGCTGATGGGGGCCCCAGGGACTCTGAACCCCTCCTGATGACCCCTATGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTTCCATCATCTCAAGTTCTCTTCTATCCAGGAGCAAAGCACAGGATCATAATAAATTTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGTTTGGGGGCCAGAGAAACACACACTCAACTGCCCACTTCATTCTGTGACCTGTCTGAG 512
                                                    l (bases 1 to 253)
Dias Neto,E., Garcia Correa,R., Verjovski-Almeida,S., Briones,M.R.,
Nagai,M.A., da Silva,W. Jr., Zago,M.A., Bordin,S., Costa,F.F.,
Goldman,G.H., Carvalho,A.F., Matsukuma,A., Baia,G.S., Simpson,D.H.,
Brunstein,A., deoliveira,P.S., Bucher,P., Jongeneel,C.V., O'Hare
,M.J., Soares,F., Brentani,R.R., Reis,L.F., de Souza,S.J. and
                                                                                                                                                                                                                                                                                                                                                                                                                EF911380 253 bp mRNA linear E
IL2-UT0073-081100-213-D02_1 UT0073 Homo sapiens cDNA,
                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo
                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                               BF911380.1
                                                                                                                                                                                                                                                                                                  uman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note-"Organ: mixed (see below); Vector: pT7T3D-Pac (Pharmacia) with a modified polylinker; Site_1: Not I; Site_2: Eco RI; Equal amounts of plasmid DNA from three normalized libraries (melanocyte 2NbHM, pregnant uterus NbHPU, and fetal heart NbHH19W) were mixed, and ss circles were made in vitro. Following HAP purification, this DNA was used as tracer in a subtractive hybridization reaction. The driver was PCR-amplified cDNAs from pools of 5,000 clones made from the same 3 libraries. The pools consisted of I.M.A.G.B. clones 360232-265223, 340488-345479, and 484488-489479."

09 a 122 c 134 g 108 t 2 others
          sequencing of the human transcriptome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /lab_host
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clone_lib="Soares_NhHMPu_S1"
/tissue_type="Pooled human melanocyte, fetal heart,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /clone="IMAGE:665143"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Homo sapiens"
/db_xref="GDB:5427175"
                                                                                                                                                                                                                                                                                                                                               GI:12302838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        33.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 host-"DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 258; DB 9;
Pred. No. 6.6e-120;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
             with
       ORF expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0;
                                                                                                                                                                                                                                                                                                                                                                                                                   mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                   REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                ACCESSION
VERSION
KEYWORDS
                               JOURNAL COMMENT
                                                                                                                                                                                                                                 SOURCE ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 10
AW265432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q
                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181 GGCCCACAGGTCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTGCTGATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ـــ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTCAACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCACCCTGCCGGTGCCCTGAGGA 537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GCTGGTGTTACCTGAGATCTGGGATGCTGAGTGGCTGTTTGGGGGCCAGAGAAACACACA 477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGCCCACAGGTCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTGCTGATGG 592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unpublished (1997)
Contact: Robert Strausberg,
Email: cgapbs-r@mail.nih.gov
                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla; Eutherla; Primates; Catarrhini; Hominidae; Homo.

1 (Dases 1 to 308)

NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                            AW265432
xq52h11.x1 NCI_CGAP_HN7
                                                                           Tumor Gene Index
                                                                                                                                                                                                                                                                                                                                                         mRNA sequence.
                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                     EST
                                                                                                                                                                                                                                                                                                                                  AW26543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: asimpson@ludwig.org.br
This sequence was derived from the FAPESP/LICR Human Cancer Genome
Project. This entry can be seen in the following URL
(http://www.ludwig.org.br/scripts/gethtml2.pl?tl=IL2&t2=IL2-UT0073-
081100-213-D02_1&t3=2000-11-08&t4=1)
Seq primer: puc 18 forward
High quality sequence stop: 220.
                                                                                                                                                                                                                                                        human.
                                                                                                                                                                                                                                                                                                          AW265432.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Simpson A.J.G.
Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sequence
Proc. Nat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rua Prof. Antonio Prudente 109,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Fax: +55-11-2707001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tel: +55-11-2704922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Natl.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /dev_stage="Adult". Vector: pucl8; Site_1: SmaI; /note="Organ: uterus_tumor; Vector: pucl8; Site_1: SmaI; Site_2: SmaI; Amini-library was made by cloning products derived from ORESTES PCR (U.S. Letters Patent application No. 196,716 - Ludwig Institute for Cancer Research) profiles into the pUC 18 vector. Reverse transcription of profiles into the pucl 18 vector of the puc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tissue mRNA and cDNA amplification were performed low stringency conditions." 67 c 79 g 56 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /db_xref="taxon:9606"
/clone_lib="UT0073"
/dev_stage="Adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                location/Qualifiers
                                                                                                                                                                                                                                                                                                          GI:6642248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Acad. Sci. U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 235; DB 10;
Pred. No. 2.8e-108
                                                                                                                                                                                                                                                                                                                                                                                 308
Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                            bp mR
sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4 andar,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (7),
                                                                                                                                                                                                                                                                                                                                                                                                         mRNA
                                                                                                                                                                                                                                                                                                                                                                              CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3491-3496 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01509-010,
                                                                                                                                                                                                                                                                                                                                                                              clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
```

Indels

0;

Gaps

Linear

EST 28-DEC-1999 IMAGE:2754309 3',

235

```
RESULT 11
BF911379
                                                                                                                                                                                                                                                                                          ACCESSION
VERSION
                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                  SOURCE
                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                      EYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 243; Conserv
           TITLE
                                                                                                                                        AUTHORS
                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           707
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              467 AGAAACACACACCCCACCTCCATTCTGTGACCCTGTCTGAGGCCCACCCTGCCGC 526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGTT 710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CACCACCCCAAGGCTGGCTGGGGAACCCTTCACCCTTCTGTGAGATTTTCCATCATCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGATGGGGGCCCAGGGACTCTGAACCCTCCTGATGACCCCTATGGCCAACATCAACCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGATGGGGGCCCAGGGACTCTGAACCCTCCTGATGACCCSTATGGCCAACATCAACCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGCCCTGAGGAGGCCCACAGGTCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGCCCTGAGGAGGCCCACAGGTCCCCTTCTAGAATTCTGGACAGCATGAGATGCGTGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGAAACACACACTCAACTGCCCACTTCATTCTGTGACCTGTCTGAGGCCCCACCCTGCCGC 85
                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 201)

Dias Neto,E., Garcia Correa,R., Verjovski-Almeida,S., Briones,M.R., Nagai,M.A., da Silva,W. Jr., Zago,M.A., Bordin,S., Costa,F.F., Goldman,G.H., Carvalho,A.F., Matsukuma,A., Baia,G.S., Simpson,D.H., Brunstein,A., deOliveira,P.S., Bucher,P., Jongeneel,C.V., O'Hare
    Shotgun sequencing of the human
                                                                                                                                                                                                                                                                                                              IL2-UT0073-081100-213-D02
BF911379
                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                        BF911379.1 GI:12302837
                                               M.J., Soares, F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tissue Procurement: Edward Shillitoe Ph.D., Silvio Gutkind Ph.D., Chidchanok Leethanakul D.D.S., Michael Emmert-Buck M.D. Ph.D. cDNA Library Preparation: David B. Krizman, Ph.D. cDNA Library Arrayed by: Greg Lennon, Ph.D. DNA Sequencing by: Washington University Genome Sequencing Center Colone distribution: NCI-CGAP clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Possible reversed clone:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      www-bio.llnl.gov/bbrp/image/image.html
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  269
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     primer: -40UP from Gibco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          quality sequence stop: 289
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note="Vector: pAMP10; cDNA made by oligo-dT priming. Non-directionally cloned into the UDG sites of pAMP10. Size-selected on agarose gel, average insert size 500 Primary library; non-amplified. cDNA Library Preparation: David B: Krizman, Ph.D (NCI). Reference: Krizman et al. (1996) Cancer Research 56:5380-5383." 97 c 73 g 69 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone="IMAGE:754399"
/clone_lib="NCI_CGAP_HN7"
/tissue_type="normal squamous epithelium,
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 25.3%;
99.6%;
                                               Brentani, R.R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 193; DB 9;
Pred. No. 6.1e-87;
                                                                                                                                                                                                                                                                                                                              201 bp
2 UT0073
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             polyT not found
transcriptome with ORF expressed
                                            Reis,L.F.,
                                                                                                                                                                                                                                                                                                                          Homo sapiens cDNA;
                                                                                                                                                                                                                                                                                                                                                  mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 308
                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                               de
                                          Souza, S.J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            floor of mouth"
                                                                                                                                                                                                                                                                                                                     mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                EST 18-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
```

Š

δõ 밁 γQ В Š 밁 ρy 밁

**FOCUS** 

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 12
BF913866/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ğ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                     SOURCE
                                                                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                        KEYWORDS
                                                                                                                                                                                                                                                                                                                          VERSION
                                                                                                                                                                                                                                                                                                                                               ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                      Snoo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
    JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    146
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGGTGAAGCTGATAAACCAGAACTGCGACTCAGCCCGGACCTC 325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGACGTGTGGAAACTGCACCTTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCA 282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCTACGACCCCTGCAGCACTGTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGGTGAAGCTGATAAACCAGAACTGCGACTCAGCCCGGACCTC 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGACGTGTGGAAACTGCACCTTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            163;
Proc. Natl.
20202663
                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla: Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 245)

Dias Neto,E., García Correa,R., Verjovski-Almeida,S., Briones,M.R., Nagai,M.A., da Silva,W. Jr., Zago,M.A., Bordin,S., Costa,F.F., Goldman,G.H., Carvalho,A.F., Matsukuma,A., Baia,G.S., Simpson,D.H., Brunstein,A., deOliveira,P.S., Bucher,P., Jongeneel,C.V., O'Hare,M.J., Sares,F., Brentani,R.R., Reis,L.F., de Souza,S.J. and
                                                     Shotgun sequencing of the human transcriptome with ORF expressed
                                         sequence tags
                                                                                  Simpson, A.J.
                                                                                                                                                                                                                                                                                                                        BF913866.1
                                                                                                                                                                                                                                                                                                                                             IL3-UT0114-301100-357-C03
BF913866
                                                                                                                                                                                                                                                                                                                                                                                    BF913866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Simpson A.J.G.
Contact: Simpson A.J.G.
Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Ludwig Institute for Prudente 109, 4 andar,
                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                   numan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               High quality sequence start: 13
High quality sequence stop: 201.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: asimpson@ludwig.org.br
This sequence was derived from the FAPESP/LICR Human Cancer Genome
Project This entry can be seen in the following URL
(http://www.ludwig.org.br/scripts/gethtml2.pl?t1-IIZ&t2-IL2-UT0073-
081100-213-D02&t3-2000-11-08&t4-1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tel: +55-11-2704922
Fax: +55-11-2707001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Seq primer: puc 18 forward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Proc. Natl.
20202663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sequence tags
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Note "Organ: uterus_tumor; Vector: puc18; Site_1: SmaI; Site_2: SmaI, A mini-library was made by cloning products derived from ORESTES PCR (U.S. Letters Patent application No. 196,716 - Ludwig Institute for Cancer Research) profiles into the puc 18 vector. Reverse transcription of tissue mRNA and cDNA amplification were performed under low stringency conditions."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone_lib="UT0073"
/dev_stage="Adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Homo sapiens"
/db_xref="taxon:9606"
                      Acad.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Acad. Sci. U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21.4%; Score 163; DB 10; 100.0%; Pred. No: 9.5e-72; cive 0; Mismatches 0;
                    U.S.A.
                                                                                                                                                                                                                                                                                                                                                           245 bp
3 UT0114
                    97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 97
                                                                                                                                                                                                                                                                                                                                                           Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (7),
                                                                                                                                                                                                                                                                                                                                                                            mRNA
                                                                                                                                                                                                                                                                                                                                                         sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3491-3496 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01509-010,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                           linear
ens cDNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               201;
                                                                                                                                                                                                                                                                                                                                                                            EST 18-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sao Paulo-SP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

Paulo-SP,

```
RESULT 13
BF914311/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                 SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                       ERSION
             JOURNAL
MEDLINE
                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  570 GCATGAGATGCGTGTGCTGATGGGGGCCCAGGGACTCTGAACCCTCCTGATGACCCCSTAT 629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             510 GAGGCCCACCCTGCCGCTGCCCTGAGGAGGCCCACAGGTCCCCTTCTAGAATTCTGGACA 569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGCCAACATCAACCCGGCACCACCCCAAGGCTGGCTGGGGAACCCTTCACCCTTCTGTGA 689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GATTTTCCATCATCTCAAGTTCTCTA 718
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCATGAGATGCGTGTGCTGATGGGGGCCCCAGGGACTCTGAACCCCTCGTGATGACCCCTAT 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGCCAACATCAACCCGGCACCACCCCAAGGCTGGCTGGGGAACCCTTCACCCTTCTGTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         208;
                                                                                             BF914311 245 bp mRNA 11r
IL3-UT0114-301100-356-E11 UT0114 Homo sapiens
BF914311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Project. This entry can be seen in the IVIIVE TO THE TITS-UT0114-(http://www.ludwig.org.br/scripts/gethtml2.pl?tl=IL3&t2=IL3-UT0114-301100-357-C03&t3=2000-11-30&t4=1)
Seq primer: puc 18 forward
Seq primer: puc 18 forward
                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fax: +55-11-2707001
Email: asimpson@ludwig.org.br
This sequence was derived from the FAPESP/LICR Human Cancer
Project. This entry can be seen in the following URL
                                                                                  Shotgun sequencing of the human transcriptome with ORF expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                     BF914311.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                High quality sequence stop: 245
Location/Qualifiers
                                                            sequence tags
                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tel: +55-11-2704922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 andar, 01509-010, Sao
                                                                                                                                                                                                                                                                                                                                                                              numan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact: Simpson A.J.G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                         Natl.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note-"Organ: uterus_tumor; Vector: puc18; Site_1: SmaI; Site_2: SmaI, A mini-library was made by cloning products derived from ORSSTES PCR (U.S. Letters Patent application No. 196,716 - Ludwig Institute for Cancer Research) profiles into the pUC 18 vector. Reverse transcription of tissue mRNA and cDNA amplification were performed under low stringency conditions."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /clone_lib-"UT0114"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /dev_stage="Adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism⇔"Homo sapiens"
/db_xref="taxon:9606"
                                         Acad Sci.
                                                                                                                                                                                                                                                                                                                                                                                                                                  GI:12305769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 158; DB 10;
Pred. No. 3.4e-69;
0; Mismatches 1;
                                   U.S.A.
                                   97
                                   (7),
                                   3491-3496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 245;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CDNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Paulo-SP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 14
AI572169
                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOCUS
                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches 116;
                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            510 GAGGCCCACCCTGCCGCTGCCCTGAGGAGGCCCCACAGGTCCCCTTCTAGAATTCTGGACA 569
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCATGAGATGCGTGTGCTGATGGGGGCCCAGGGACTCTGAACCCTCCTGATGACCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCATGAGATGCGTGTGCTGATGGGGGCCCAGGGACTCTGAACCCTCCTGATGACCC 625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAGGCCCACCCTGCCGCTGCCCTGAGGAGGCCCACAGGTCCCCTTCTAGAATTCTGGACA
                                                                                                                                                                    This sequence was derived from the FAPESP/LICR Human Cancer Genome Project. This entry can be seen in the following URL (http://www.ludwig.org.br/scripts/gethtm12.pl?ti=IL3&t2=IL3-UT0114-301100-356-El1&t3=2000-11-30&t4=1)
Seg primer: puc 18 forward
High quality sequence stop: 245.
                                                                                                                                                                                                                                                                                                               Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                          Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                                                         National Cancer Institute,
                                                                                                                                                                                                                                                                                                                                                                                                                    NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap
                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa;
Mammalia; Eutheria;
1 (bases 1 to 275)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo .sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A15/2169 RNA linear te37e06.xl Soares_NhHMPu_Sl Homo sapiens cDNA clone 3', mRNA secuence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ludwig Institute for Cancer Research Rua Prof. Antonio Prudente 109, 4 andar,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: asimpson@ludwig.org.br
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Fax: +55-11-2707001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tel: +55-11-2704922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Laboratory of Cancer Genetics
Ludwig Institute for Cancer Re
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Simpson A.J.G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mRNA sequence
                                                                                                                                                         quality sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note="Organ: uterus_tumor; Vector: puc18; Site_1: SmaI; Site_2: SmaI, A mini-library was made by cloning products derived from ORESTES PCR (U.S. Letters Patent application No. 199,716 - Ludwig Institute for Cancer Research) profiles into the pUC 18 vector. Reverse transcription of tissue mRNA and cDNA amplification were performed under low stringency conditions. The public of 
/clone="IMAGE:2088898"
/clone_lib="Soares_NhHMPu_S1"
                                                   /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /dev_stage="Adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /db_xref="taxon:9606"
/clone_lib="UT0114"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   organism≖"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Chordata;
Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 116; DB 10; Pred. No. 7.2e-48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                              Cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                            Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01509-010, Sao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                   contact the information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IMAGE: 2088898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EST 13-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

Gaps

0

150

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 15
BG951874/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
Matches 74; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181 ACTGTTGCTATGAT 194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  178 ACCTGATGCTGTGCCAGCCACACAAGAGATGTGGGGGACAAGTTCTACGACCCCCTGCAGC 237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121 ACCTGATGCTGTGCCAGCCACACAAGAGATGTGGGGGACAAGTTCTACGACCCCCTGCAGC 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      238 ACTGTTGCTATGAT 251
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 103)

Dias Neto,E., Garcia Correa,R., Verjovski-Almeida,S., Briones,M.R., Nagai,M.A., da Silva,W. Jr., Zago,M.A., Bordin,S., Costa,F.F., Goldman,G.H., Carvalho,A.F., Matsukuma,A., Baia,G.S., Simpson,D.H., Brunstein,A., deOliveira,P.S., Bucher,P., Jongeneel,C.V., O'Hare,M.J., Soares,F., Brentani,R.R., Reis,L.F., de Souza,S.J. and
                                                                                                                                                                                                                                           Simpson, A.J.
Shotgun sequencing of the human transcriptome with ORF expressed sequence tags
                                                                                                                                                                                                                                                                                                                                            Tel: +55-11-2704922
Fax: +55-11-2707001
                                                                                                                                                                                                                                                                                                                                                                                                               Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 andar, 01509–010, Sao Paulo-SP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BG951874 103 bp mrNA linear EST 12-JUN-2001 CM4-CT0663-150101-677-c08 CT0663 Homo sapiens cDNA, mrNA sequence.
                                                                                                                                                                                                       (http://www.ludwig.org.br/scripts/gethtml2.pl?ti=CM4&t2=CM4-CT0663-
150101-677-c08&t3=2001-01-15&t4=1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Simpson A.J.G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BG951874.1 GI:14370045
                                                                                                                                                                                 primer: puc 18 forward
                                                                                                   quality sequence start: 26 quality sequence stop: 103. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    . Natl. Acad. Sci. U.S.A. 97 (7), 3491-3496 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        reaction. The driver was PCR-amplified cDNAs from pools of 5,000 clones made from the same 3 libraries. The pools consisted of I.M.A.G.E. clones 260232-265223, 340488-345479, and 484488-49479."
/db_xref="taxon:9606"
/clone_lib="CT0663"
                                               organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="Organ: mixed (see below); Vector: pT/T3D-Pac (Pharmacia) with a modified polylinker; Site_1: Not I; Site_2: Eco RI; Equal amounts of plasmid DNA from three normalized libraries (melanocyte 2NbHM, pregnant uterus NbHPU, and fetal heart NbHH19W) were mixed, and ss circles
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  were made in vitro. Following HAP purification, this DNA was used as tracer in a subtractive hybridization
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /tissue_type="Pooled human melanocyte, fetal heart, and
pregnant uterus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9.7%; Score 74; DB 9; L
100.0%; Pred. No. 1.6e-26;
tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
```

VERSION

Š 밁

밁

COMMENT

TITLE

```
25
/note-"Organ: colon; Vector: puc18; Site_1: SmaI; Site_2: SmaI; A mini-library was made by cloning products derived from ORESTES PCR (U.S. Letters Patent application No. 196, 716 - Ludwig Institute for Cancer Research) profiles into the pUC 18 vector. Reverse transcription of tissue mRNA and cDNA amplification were performed under low stringency conditions."
                                                                                                                                                                                196
```

Query Match Best Local Similarity Matches 60; Conservative 7.9%; 0, Score 60; Pred. No. Mismatches DB 10; 1.6e-19; Length 103; Indels 0,

0

BASE COUNT

20

밁

Search completed: November Job time: 1698 secs ω 2002, 03:02:14

```
US-08-485-284A-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; TYPE: DNA
; ORGANISM: Coprinus cinereus
US-09-181-827A-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; NAME/KEY:
; LOCATION:
US-09-389-528-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 2.2%; Score 17; DB 4; Best Local Similarity 100.0%; Pred. No. 35; Matches 17; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQ ID NOS: 36
SOFTWARE: FRASTSEQ for Windows Version 4.0
SEQ ID NO 22
LENGTH: 1161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ouery Match 2.2%; S
Best Local Similarity 100.0%;
Matches 17; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 2
Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION NUMBER: US/09/181,827A CURRENT FILING DATE: 1998-10-28 PRIOR APPLICATION NUMBER: 60/002,800 PRIOR FILING DATE: 1995-08-25
                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              09-181-827A-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILE REFERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PPPLICANT: Kauppinen, Sakari
PPPLICANT: Halkier, Torben P.
PITLE OF INVENTION: Purified Coprinus Laccases And Nucleic
PRITE OF INVENTION: Acids Encoding Same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                        ywence 3, Application US/08485284A
Lent No. 5750372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PPLICANT:
                 COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk
                                                                                                                                             CORRESPONDENCE ADDRESS
                                                                                                                                                                        APPLICANT: HATANAKA, HARUYO
TITLE OF INVENTION: NOVEL VECTOR HAVING PROMOTER THAT IS
TITLE OF INVENTION: INDUCIBLE BY METHANOL AND/OR GLYCEROL
                                                                                                                                                              NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                              PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MOLECULE TYPE: CDNA
                                                               COUNTRY:
                                                                                                                               ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRANDEDNESS: single TOPOLOGY: linear
                                                                                               TY: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               22, Application US/09181827A
5. 6242232
                                                    20005-3918
                                                                                 ٥
د
د
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Yaver, Debbie S.
Brown, Kimberly M.
                                                                                                           E: CUSHMAN DARBY & CUSHMAN, L.L.P. 1100 New York Avenue, N.W.
                                                                                                                                                                                                                             KONDO, HIROTO
                                                                                                                                                                                                                                            SHIBANO,
                                                                                                                                                                                                                                                                             SAKAI, YASUYOSHI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CDS
IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1..1161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4554.200-US
                                                                                                                                                                                                                                                YOSHIKI
NNO, YUJI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 17;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 1161;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 1161;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
```

```
Search completed: November Job time : 59 secs
                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-485-284A-3
                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 17; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: (202) 822-0944
TELEX: 6714627 CUSH
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                       1563 TGGTGAAGCTGATAAAC 1579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY: unknown MOLECULE TYPE: genomic DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER: 21
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 861-3000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:
APPLICATION NUMBER: JP 43361/1992
FILING DATE: 28-FEB-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OPERATION CONTROL OF THE CONTROL OF 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US 08
APPLICATION NUMBER: US 08
FILING DATE: 01-MAR-1993
ATTORNEY/AGENT INFORMATION:
NAME: WHITE JR., PAUL E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 28-FEB-PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                   283 TGGTGAAGCTGATAAAC 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       nucleic acid
DEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1992 base pairs
                                                                                                                                                                                                                                                                                                                                                                          2.2%; Silarity 100.0%; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        07-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PC-DOS/MS-DOS
n Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US 08/025,416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                32,011
                                       2002, 01:07:56
                                                                                                                                                                                                                                                                                                                                                                     ; Score 17; DB
%; Pred. No. 35;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        217755/FPS38209US
                                                                                                                                                                                                                                                                                                                                                                                                                       DB 1; Length 1992; 35;
                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                     Gaps
```

0;

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-884-866A-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-884-866A-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; LOCATION: (1)...(570)
US-08-884-866A-2
                                                                                                                                                                                                                                                                                                                          Sequence 22, April No. 600807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                              -08-689-421-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 11, Application US/08884866A GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 2.2%; Score 17;
Best Local Similarity 100.0%; Pred. No
Matches 17; Conservative 0; Mismat
                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/08/884,866A CURRENT FILING DATE: 1997-06-30 PRIOR APPLICATION NUMBER: 60/030,358 PRIOR FILING DATE: 1996-11-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: GENE THERAPY IN CORONARY ANGIOPLASTY AND TITLE OF INVENTION: BYPASS FILE REFERENCE: UCSD1100-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Chien, Shu
APPLICANT: Shyy, John
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: misc_feature
LOCATION: (49)...(51)
OTHER INFORMATION: UCC, UCG, UCU, AGC, or AGU
OTHER INFORMATION: Variation of SEQ ID NO.:2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 57
TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURE:
                                               MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                             APPLICANT: Yaver, Debbie S. APPLICANT: Brown, Kimberley
                                                                                                                                                                              CORRESPONDENCE ADDRESS
                                                                                                                                                                                                NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                  PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             606 CTGAACCCTCCTGATGA 622
                                                                                                                                                                                                                ITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                              511 CTGAACCCTCCTGATGA 527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  606 CTGAACCCTCCTGATGA 622
             MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          511 CTGAACCCTCCTGATGA 527
                                                                                                                                                   STREET:
                                                                                                  COUNTRY:
                                                                                                                                                               ADDRESSEE:
                                                                                 B: New York
RY: United States of America
10174-6401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              l Similarity
17; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          570
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                             Application US/08689421
                                                                                                                                               405
                                                                                                                                                                                                                                         Kauppinen,
Halkier, To
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                               Lexington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        John Y-J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1996-11-08
                                                                                                                                            60080290 No. 6008029disk of No. 6008029th America, Inc.
kington Avenue, 64th Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2.2%; SC
7 100.0%; Pr
1.22 0;
                                                                                                                                                                                                                                                                             Kimberley M.
                                                                                                                                                                                                              PURIFIED ENCODING
Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                 Sakar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 17; DB 4; Length 570; Pred. No. 35; 0; Mismatches 0; Indels
                                                                                                                                                                                                              COPRINUS LACCASES AND NUCLEIC ACIDS SAME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 570;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
```

```
US-08-689-421-22
                                                                               CURRENT APPLICATION.

APPLICATION NUMBER: US/09/383/,

PILING DATE:

CLASSIFICATION:

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/08/689,

ETLING DATE: 9-AUG-1996

ATTORNEY/AGENT INFORMATION:

NAME: Harrington, James J.

NAME: Harrington, James J.

NAME: 38,711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS
SEQUENCE CHARACTERISTICS:
                                              TELECOMMUNICATION INFORMATION: TELEPHONE: 212-867-0123
                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0,
                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          199 CCGTCGTGCCCTTGGCC 215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            350 CCGTCGTGCCCTTGGCC 366
                                                                            REGISTRATION NUMBER: 38 REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                     CITY: New York
STATE: New York
                                                                                                                                                                                                                                                                                                                                       COUNTRY: United States of America ZIP: 10174-6401
                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity es 17; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            POPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Harrington, James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Application US/09389528
                                                                                                                                                                                                                                                                                                                                                                                                   405 Lexington Avenue,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1161 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Brown,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      212-878-9655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kauppinen,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                       No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     212-867-0123
                                 878-9655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9-AUG-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      single
                                                                                                                                                                                                                                                                                                                                                                                                   6207430o No. 6207430disk of No. xington Avenue, 64th Floor
              ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Kimberley M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Debbie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              PURIFIED COPRINUS LACCASES ENCODING SAME
                                                                                                                                                                                                                                                     Release #1.0, Version #1.30
                                                                                                                                                          US/08/689,421
                                                                                                                                                                                                                         US/09/389,528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US/08/689,421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  38,711
                22:
                                                                              4554.204-WO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4554.204-WO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 3;
35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 1161;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AND NUCLEIC
                                                                                                                                                                                                                                                                                                                                                                                                              6207430th America, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACIDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
```

base pairs caid

밁 Š

```
RESULT 9
US-08-716-308-9/c
                                                         밁
                                                                                                                                                                    ANTI-SENSE:
JS-08-256-368-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-256-368-6
                                                                                                              Query Match
Tocal Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 6,
                                                                                                                                                                                                                                                                                                                           NFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
ODERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                               HYPOTHETICAL:
                                                                                                                                                                                                WOLECULE TYPE: other nucleic acid
DESCRIPTION: /desc = "complementary 3'-5' strand of synthetic
DESCRIPTION: polylinker in pVL1392. See Figure 2."
HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
LENGTH: 45 base pairs
                                                                                  551 CCTTCTAGAATTCTGGA 567
                                                                                                                                                                                                                                                                                                                                                                                   FELECOMMUNICATION INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HYPOTHETICAL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ANTI-SENSE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    551 CCTTCTAGAATTCTGGA 567
                                                       12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PPLICANT:
                                                                                                                                                                                                                                                                                                                                                       TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/08/256,368
FILING DATE: 22-JUL-1994
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ITLE OF INVENTION:
ITLE OF INVENTION:
                                                                                                                                                                                                                                                                    STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                  TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                REGISTRATION NUMBER: 30,330 REFERENCE/DOCKET NUMBER: 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STREET: 8110 Gatenc
CITY: Falls Church
STATE: Virginia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    38 CCTTCTAGAATTCTGGA 22
                                                                                                                                                                                                                                                        OPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity les 17; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                            EGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DDRESSEE:
                                                      nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22042
                                                                                                                                                                                                                                                                                                                                                                                                                            Svensson, Leonard R
                                                                                                                                                                                                                                                                                                                                         248345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Application US/08256368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3: Birch, Stewart, Kolasch & Birch Bilo Gatehouse Road, Suite 500 East
                                                                                                                                                                                                                                                                                                                                                    (703)205-8050
                                                                                                              Conservative
                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Callegaro, Lanfranco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ĕ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Negro, Alessandro
                                                                                                                                                                                                                                                                                                                                                                  (703)205-8000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ĕ
                                                                                                                                                                                                                                                                    double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2.2%;
                                                                                                                     100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ombretta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               In Cells Of Spodoptera Frugiperda Infected With Recombinant Baculovirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Expression Of Osteogenic Factor OP-1
                                                                                                                                          2.2%;
                                                                                                                                                                                                                                                                                                                           6.
                                                                                                            0,
                                                                                                                           Score 17;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 17;
Pred. No.
                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                           DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 1;
34;
                                                                                                                                      Length 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 45;
                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                           0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .Gaps
                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

```
: NUMBER OF SEQ ID NOS: 25
: SOFTWARE: FastSEQ for Windows
: SEQ ID NO 2
: LENGTH: 570
: TYPE: DNA
: ORGANISM: Rattus norvegicus
                                                                                                                                                                                                                                                                                                                                                             US-08-884-866A-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-08-716-308-9
                                                                                                                                                                                                                                                                                                                         Sequence 2, Application US/08884866A GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                    TITLE OF INVENTION: GENE THERAPY IN CORONARY ANGIOPLASTY AND TITLE OF INVENTION: BYPASS
FILE REFERENCE: UCSD1100-1
CURRENT APPLICATION NUMBER: US/08/884,866A
CURRENT FILING DATE: 1997-06-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 9, Application US/08716308 Patent No. 5885569
                                                                                                                                             PRIOR APPLICATION NUMBER: 60/030,358
PRIOR FILING DATE: 1996-11-08
                                                                                                                                                                                                                                                                                  APPLICANT: Chien, Shu
APPLICANT: Shyy, John Y-J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
APPLICANT: Windas
FEATURE:
NAME/KEY: CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: PCT/
FILING DATE: 27-MAR-1995
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 24-SEP-1
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE/DOCKET NUMBER: PP
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: GB 9
FILING DATE: 25-MAR-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                           551 CCTTCTAGAATTCTGGA 567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity 100.0%;
hes 17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                         38 CCTTCTAGAATTCTGGA 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: nucleic acid
STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Hohenschutz, Liza D. REGISTRATION NUMBER: 33,712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: US/08/716,308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            19850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Wilmington.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       45 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              E: ZENECA Inc.
1800 Concord Pike
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (302)
                                                                                                           for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     24-SEP-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 886-1699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Biological Insect Control Agent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GB 9405951.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PCT/GB95/00677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PPD40027X/UST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

밁

0

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                   us-09-032-475-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                tent No. 5854003
                                                                                                                                                                                                                                                                                                                                  ENERAL INFORMATION:
                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIA Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: (415) 343-4342
NFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                CORRESPONDENCE ADDRESS:
ADDRESSEE: SCIENCE & TECHNOLOGY LAW GROUP
STREET: 268 BUSH STREET, SUITE 3200
CITY: SAN FRANCISCO
STATE: CALIFORNIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                              APPLICANT: Rothe, M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE/DOCKET NUMBER: T9
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                   713 ACGTGTGGAAACTGCACC 730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Wu, Lin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   225 ACGTGTGGAAACTGCACC 242
                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                               TLE OF INVENTION: NIK Proteins, Nucleic Acids and Methods MBER OF SEQUENCES: 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRANDEDNESS:
TOPOLOGY: 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY:
                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ENGTH: 3156 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADDRESSEE:
                                                                                                                                                  94104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           94104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SSEE: SCIENCE & TECHNOLOGY LAW GROUP
1: 268 BUSH STREET, SUITE 3200
SAN FRANCISCO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                nucleic acid
                                                                                                                                                                                                                                                                                                                                                                Application US/09032475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OSMAN, RICHARD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CALIFORNIA
                                                                                                                                                              USA
                                                                                                                                                                                                                                                                                                              Rothe, Mike
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rothe, Mike
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (415) 343-4341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2.4%; Score 18;
100.0%; Pred. No.
tive 0; Mismatcl
                                US/09/032,475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US/08/887,518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US/09/023,321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    36,627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    T97-008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 3156;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-032-475-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-256-368-5/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity 100. Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                   SOFTWARE: PATENTIN Release
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08,
FILING DATE: 22-JUL-1994
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Syensson, Leonard R
REGISTRATION NUMBER: 30,3
                                                                                                                                           TELEFAX: (703)205-805
TELEX: 248345
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX: (415) 343-43 (NFORMATION FOR SEQ ID NO:
                                                                                                                                                                           REFERENCE/DOCKET NUMBER: 25
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703)205-8000
TELEFAX: (703)205-8050
                                                                                           SEQUENCE CHARACTERISTICS:
LENGTH: 45 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              UMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            713 ACGTGTGGAAACTGCACC 730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              225 ACGTGTGGAAACTGCACC 242
                                                                                                                                                                                                                                                                                                                                                                                            MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CITY: Falls Church
                                                                           STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5, Application US/08256368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Virginia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       E: Birch, Stewart, Kolasch & Birch
8110 Gatehouse Road, Suite 500 East
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3156 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Callegaro, Lanfranco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Negro, Alessandro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Birch,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (415) 343-4341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           cDNA
other nucleic acid
/desc = "5'-3' strand of synthetic
polylinker in pVL1392. See Figure
                                                                           double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RICHARD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                343-4342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Expression Of Osteogenic Factor OP-1
In Cells Of Spodoptera Frugiperda Infected With
Recombinant Baculovirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ombretta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%;
                                                                                                                                                                                                                                                                                                                                                                             Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                           US/08/256,368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           08/887,518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     36,627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 18; ; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     T97-008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
```

0

See Figure 2."

08-470-179-59

405

```
; ORIGINAL SOURCE:
; ORGANISM: Chl
US-08-470-179-59
                                                                                                                                                                                                          US-09-257-703-2
                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 18; Conserv
                                                                                                                                                               sequence 2, Application US/09257703
Patent No. 6265538
CURRENT APPLICATION NUMBER: US/09/257,703
                APPLICANT: Gelezuinas, Romas
TITLE OF INVENTION: A NOVEL INHIBITOR OF THE INFAMMATORY RESPONSE INDUCED
TITLE OF INVENTION: BY TWE-ALPHA AND IL-1
FILE REFERENCE: 30448.61050
                                                                                                                                              ENERAL INFORMATION:
                                                                                                    APPLICANT: Greene, Warner C.
APPLICANT: Lin, Xin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION FOR SEQ ID NO: 5
SEQUENCE CHARACTERISTICS:
LENGTH: 422 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: 801-531-9168
NFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          equence 59, Appl
atent No. 564599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY: not relevant
NOLECULE TYPE: other nucleic acid
DESCRIPTION: /desc = "gyrA gene segment"
HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ANTI-SENSE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
NAME: Sweigert Ph.D. Susan E.
REGISTRATION UNMBER: 36,289
REFERENCE/DOCKET NUMBER: 2601
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        tent No.
                                                                                                                                                                                                                                                                                                                      719 TCCAGGAGCAAAGCACAG 736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                 60 TCCAGGAGCAAAGCACAG 77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY: U:
ZIP: 84110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STATE: Utal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE: Trask, Britt and Rossa
STREET: P.O. Box 2550
CITY: Salt Lake City
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Application US/08470179
                                                                                                                                                                                                                                                                                                                                                           2.4%;
ilarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chlamydia trachomatis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Huang Ph.D, Wai Mun
VENTION: Method and Compositions for VENTION: Identification of Species in a Sample
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        801-532-1922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US/08/470,179
                                                                                                                                                                                                                                                                                                                                                             0,
                                                                                                                                                                                                                                                                                                                                                                                 Score 18; Pred: No.
                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                             DB 1; Length 422;
                                                                                                                                                                                                                                                                                                                                                           0,
                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                      0,
```

RESULT 5 US-09-023-321-1

Sequence 1, Application US/09023321 Patent No. 5844073

INFORMATION

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 4
US-08-887-518-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; LENGTH: 2844
; TYPE: DNA
; ORGANISM: NF-KAPPA B INDUCING KINASE (NIK)
US-09-257-703-2
                                                                           Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 1, APP--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity
                                                                                                                                                                                                     TELEFAX: (415) 343-434
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EARLIER FILING DATE: 1998-02-27 NUMBER OF SEQ ID NOS: 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                FILLY CATION:
CLASS/FICATION:
ATTORNEY/AGENT INFORMATION:
ATTORNEY OSMAN, RICHARD A
NAME: OSMAN, RICHARD A
NAME: OSMAN NIMBER: 36,627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
ADDRESSEE: SCIENCE & TECHNOLOGY LAW GROUP
STREET: 268 BUSH STREET, SUITE 3200
CITY: SAN FRANCISCO
STATE: CALIFORNIA
                                                                                                                                 MOLECULE TYPE: cDNA
                                                                                                                                                                                                                                                              TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
225 ACGTGTGGAAACTGCACC 242
                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             225 ACGTGTGGAAACTGCACC 242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ID NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ITLE OF INVENTION: NIK Proteins, Nucleic Acids and Methods
                                                                        Local
                                                                                                                                                TOPOLOGY:
                                                                                                                                                                                                                                                TELEPHONE:
                                                                                                                                                                                                                                                                             REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
                                                                      Similarity
                                                                                                                                                                        nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Application US/08887518
                                                                                                                                                                                      3156 base pairs
                                                                                                                                                                                                                                                                                                                                                                                         PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rothe, Mike
                                                                                                                                                                                                                                                (415)
                                                                                                                                                                                                                                                                                                                                                                                                                                     Floppy disk
                                                                                                                                                            double
                                                                                                                                                                                                                                   343-4342
                                                                      100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2.4%;
                                                                                                                                                                                                                                                                                                                                                                US/08/887,518
                                                       0;
                                                                                  Score 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0,
                                                                                                                                                                                                                                                                             T97-008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 18;
Pred. No.
                                                                        Pred. No.
                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                    DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB
11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4;
                                                                                  Length 3156;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 2844;
                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

9 2 3

Sequence Sequence

Sequence 6, Appli Sequence 1, Appli Patent No. 518359 Patent No. 5449756 Sequence 1, Appli Sequence 4, Appli Sequence 4, Appli Sequence 17, Appl Sequence 20, Appl

Sequence Sequence Sequence Sequence Sequence Sequence

254,

Appl App

4, Appli 42, Appl 211, App

```
Total number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Word size
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Post-processing: Listing first 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OM nucleic -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and is derived
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB
                                                                                                                                                                                                                                                                                                                                                                                                     Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    d. No. is the number of results predicted by chance to have
re greater than or equal to the score of the result being pa
is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     seq length: 0
seq length: 2000000000
          of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        nucleic search, using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Issued_Patents_NA:*

1: /cgn2_6/ptodata/1,

2: /cgn2_6/ptodata/1,

3: /cgn2_6/ptodata/1,

4: /cgn2_6/ptodata/1,

5: /cgn2_6/ptodata/1,

6: /cgn2_6/ptodata/1,
                                                                                                                                                                                                                                                                                                                                                                                                   Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OLIGO_NUC
Gapop 60.0 , Gapext 60.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-092-297-5
763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    383533 seqs, 122816752 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             November
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTCCACTGCAACCACCCAGA.....ATAAATTTATGTACTTTATA 763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /cgn2_6/ptodata/1/ina/5A_COMB.seq:*
/cgn2_6/ptodata/1/ina/5B_COMB.seq:*
/cgn2_6/ptodata/1/ina/6A_COMB.seq:*
/cgn2_6/ptodata/1/ina/6B_COMB.seq:*
/cgn2_6/ptodata/1/ina/BCTUS_COMB.seq:*
/cgn2_6/ptodata/1/ina/Backfiles1.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                   Length
       2238
2940
2940
2940
3715
3715
3728
3728
6453
6453
11284
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2, 2002, 23:18:40 ; Search time 48 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GenCore version 5.1.3 (c) 1993 - 2002 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                     DB
                 US-08-887-518-1
US-09-023-321-1
US-09-023-475-1
US-08-256-368-5
US-08-256-368-6
US-08-884-866A-2
US-08-889-421-22
US-09-389-528-22
US-09-181-827A-22
US-09-181-827A-22
US-09-181-827A-28
US-09-181-827A-28
US-09-181-827A-28
US-09-041-886-10
US-09-366-918-14
US-09-366-918-14
US-09-366-918-14
US-09-366-918-14
US-09-37A-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                            SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (without alignments)
3904.549 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              767066
Sequence 2, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 5, Appli
Sequence 6, Appli
Sequence 2, Appli
Sequence 2, Appli
Sequence 22, Appli
Sequence 23, Appli
Sequence 24, Appli
Sequence 28, Appli
Sequence 10, Appli
Sequence 11, Appli
Sequence 11, Appli
Sequence 14, Appli
Sequence 16, Appli
Sequence 17, Appli
Sequence 18, Appli
Sequence 19, Appli
                                                                                                                                                                                                                                                                                                                                                                                                Description
                                                                                                                                                                                                                                                                                                                                                     Sequence 142, App
Sequence 59, Appl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 printed,
 S
                                                                                    US-08-470-179-142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 1
US-08-470-179-142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0000
                              Matches
                                        Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Patent No. 5645994
GENERAL INFORMATION:
APPLICANT: Huang Ph.D,
TITLE OF INVENTION: Met
TITLE OF INVENTION: Ide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 142, Application
                                                                                                       SEQUENCE CHARACTERISTICS:
LENGTH: 423 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: not relevant
MOLECULE TYPE: DNA (genomi
HYPOTHETICAL: NO
ORIGINAL SOURCE:
ORGANTSM: MOCOLISTM ATT
                                                                                                                                                                                                                                      REFERENCE/DOCKET NUMBER: 26
TELECOMMUNICATION INFORMATION:
TELEPHONE: 801-532-1922
TELEFAX: 801-531-9168
INFORMATION FOR SEQ ID NO: 142:
                                                                                                                                                                                                                                                                                                          CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Sweigert Ph.D, Sus
REGISTRATION NUMBER: 36,
                                                                                                                                                                                                                                                                                                                                                                                         MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                  ZIP: 84110
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES: 2
CORRESPONDENCE ADDRESS:
351 AGCTAATGGAACATCAGGG 369
                                                                                                 ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US/08/470,179 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STREET: P.O. Box 255
CITY: Salt Lake City
STATE: Utah
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE:
                             l Similarity
19; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Utah
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     E: Trask, Britt and Rossa
P.O. Box 2550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            USA
                             Conservative
                                                                                                Mycoplasma arthritidis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                944
1152
11421
1421
1421
1421
2351
2351
4035
4035
4035
4035
7560
7560
246240
                                                                                                                                                      (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Method and Comp
Identification
                                          100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US/08470179
                                                                                                                                                                                                                                                                                                      Susan 1
36,289
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-991-789A-252
US-09-062-451-252
US-09-385-982-144
US-09-385-982-144
US-09-386-493-4
US-09-188-930-721
US-09-188-930-254
US-09-188-930-254
US-09-188-930-254
US-08-391-743A-1
5198359-1
5449756-1
US-09-193-257-1
US-09-193-3257-1
US-08-724-394A-21
                             0
                                                                                                                                                                                                                                                                                               2601
                                          Score 19;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Compositions for tion of Species in a Sample
                             Mismatches
```

Version

#

. 30

Result

Minimum

a

. 3.B ۲.

Length 423;

0

Gaps

0

a

a

```
/gene="NMB1700"
6778. .7143
                                                                                                                                                                                                                                                                                                                                                                                                                                            /translation="mdkldycrrffatwlgfvlfgvggimklvllpytlngtsgsva
RQLAARRIIGTSWRLFVAYLKWSGVLEVSFKGVEKLNRBGQLLIANHFSLLDVVLLVG
HVPERNCIVKKDLGNIPAMSOJIKGAGYIPNESSEAMLETVKAVFDSGQSLLVFPEGT
RTGWDGRVKHHRGAVSLGLRYAEVITPVGIKMPPNFKKGQPWYRIPFKRIRYEITVG
DDILPQDWLAEKPLPIAARRLNEYLQDYFTRKTI".
                                                                                           /translation="mseQTALAVCADGVETALAEAASLLEEGGGSVLVLAADDDLPEG
YAVSATRAPFAYALAMVLTKGTRYSLTLSASDDMPSEAGMLPEAYWSGLEWVRFLLNG
                                                                                                                                                                                                                                                                                         /note="hypothetical protein; identified by Glimmer2;
putative"
                                                                                                                                                                                                                                                                                                                                              complement(6253. .6618)
/gene="NMB1699"
                                                                                                                                                                                                                                                                                                                                                                                                /gene="NMB1699"
                                                                       SRECRRVYRNREWLWORNG"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="similar to GB:AE000511 PID:2314519 percent identity: 52.85; identified by sequence similarity putative"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       complement(5502, .6260)
/gene="NMB1698"
                                                                                                                                                     /product="hypothetical protein"
/protein_id="AAF42047.1"
/db_xref="GI:7226954"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /transl_table=11
/product="acyltransferase, putative"
/protein_id="AAF42046.1"
/db_xref="GI:7226953"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  complement(5502. .6260)
/gene="NMB1698"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /translation="mnDLENQIKQLIIDSLALEDITAADIGSEDALFGDGGLGLDSVD
ALELGLAVQKHFGFRLDGEQENLREHFANVKTLAAFVKSRQA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              complement(5245. .5505)
/gene="NMB1697"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /gene="NMB1697"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /translation="mteQEIYRLLRDTLTELFEIEPERITPDTNLYEDLEIDSIDAID
LIDRIKRETGRKLQAEDFRNYRTVNDVYQAVLKIQAG"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               complement(4988. .5233)
/gene="NMB1696"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VKAALIVVKTLFADGYPHAIFORFLMEDNRNRÖHRADKAVGLVGIADDAEIRIAFCLI
SNAFFFTELIIGIGCGKADCGHFFVVFAAGSASVHKVSDFQNEFAVKPFAGKQHPHQY
IGNHAGINRPFIISPQPCQQSGKRPVDYKKYAPNLRYPAGIAHGFFRQVGLLQPRKFF
                                                                                                                                                                                                                                     transl_table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /product="acyl carrier protein, putative"
/protein_id="AAF42045.1"
/db_xref="GI:7226952"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note="similar to PID:1655811 percent identity: 52.94;
identified by sequence similarity; putative"
/codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            complement(4988. .5233)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AQQPQPAHRRRQPNKPARLPAVYSGLTKTSTALPRLAVLSAASSPCPDFC"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NHRLPGKQAAAEHRQHHQIDEDGIPIHRIMPPEHQYCGKKQCNKQSRITLLGQFGSQG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          transl_table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /product="acyl carrier protein"
/protein_id="AAF42044.1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     'note="similar to PID:870808 percent identity: 58.23;
identified by sequence similarity; putative"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /gene="NMB1696"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /product="hypothetical protein"
/protein_id="AAF42043.1"
/db_xref="GI:7226950"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="hypothetical protein; identified by Glimmer2;
putative"
                                                                                                                                                                                                                                                                codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 db_xref="GI:7226951"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           transl_table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       codon_start=]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    translation="MELQQRTLTIGLGNDIAVQTEGVGFIRGQLVADHAEINSVFKVV"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      transl_table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                           .6618)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sequence similarity;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Search completed: November Job time: 2012 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CDS
```

gene CDS CDS

gene CDS

gene

CDS

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                     US-09-092-297-17 (1-117) x AE002520 (1-12050)
                                                                                                                                                                                                                                                                         Alignment Scores:
                                                  8356 CAGCCCCATAAGCGCTGCGGGGAC 8333
                                                                     45 GlnProHisLysArgCysGlyAsp 52
                                                                                                                                                                                                                                                                                                                                                                                               /gene="NMB1702"
7724 ...8452
/gene="NMB1702"
                                                                                                                                                                                                                                                                                                                                                           /note="similar to 90.91; identified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /translation="MDTLPECPITNTASLLPHSGRMVLIDRITRYGDDFVEAGAQVSP
NHILLLDDKLPYTAFIELMAQAVGAYAGIQARKNARSVRLGFLLGTRKLEIFAQSVPI
GTHLLATAHMSIQDAGGMGVFDCELRWTDAPETSSETLPSDGILARASLNVYSPEHPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTTDAV"
                                                                                                                                                                                                                                                                                                     /product="3-oxoacyl-(acyl-carrier-protein) reductase"
                                                                                                                                                                                                                                                                                                                          /codon_start=1
/transl_table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                         7724. .8452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        putative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7196. .7696
/gene="NMB1701"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /translation="mGGGNVPSRVAYQTRRLTQTAALHSGQERQFRPDIGQTVGKIRT
FRPFCPLGHIAHFAARNPPGGDVEVEPANNRRHSFFQKFTLCRILTKAYPPDNAEIQT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            putative"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /transl_table=11
/product="hypothetical protein"
/protein_id="nakf42049.1"
/db_xref="GI:7226956"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note="hypothetical protein; identified by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HFCPLSPTTPPLGKPPELA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /gene="NMB1700".
/note="hypothetical protein; identified by Glimmer2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  'drans_table=11
'product="hypothetical protein"
'protein_id="AAF42048.1"
'db_xref="GI:7226955"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'gene="NMB1701"
                                                                                                                                                                               100.00%
100.00%
6.84%
                                                                                                                                                                                                                                    210
8.00
ω
2002, 05:46:48
                                                                                                                                                                          Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                      SP:P70720 PID:1651214 percent identity: by sequence similarity; putative"
                                                                                                                                                             Gaps:
                                                                                                                                                                                                                                    Matches:
                                                                                                                                                                                                                                                   Length:
                                                                                                                                                              0000 0
                                                                                                                                                                                                                                                   12050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Glimmer2;
```

```
AE002520/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-092-297-17 (1-117)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Percent Similarity:
Best Local Similarity:
                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                   ZERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-092-297-17 (1-117) x HSCALCAC (1-7637)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /ERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     rocus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C017452
                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           6265 CCATGGACCTTCATGGTAAAGTTG 6242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  М
. :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PheCysIleSerArgLeuLeuCys 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ProTrpThrPheMetValLysLeu 97
Tettelin,H., Saunders,N.J., Heidelberg,J., Jeffries,A.C., Relson,K.E., Eisen,J.A., Ketchum,K.A., Hood,D.W., Peden,J.F., Dodson,R.J., Nelson,W.C., Gwinn,M.L., DeBoy,R., Peterson,J.D., Hickey,E.K., Haft,D.H., Salzberg,S.L., White,O., Fleischmann,R.D., Dougherty,B.A., Mason,T., Ciecko,A., Parksey,D.S., Blair,E., Cittone,H., Clark,E.B., Cotton,M.D., Utterback,T.R., Khouri,H., Qin,H., Vamathevan,J., Gill,J., Scarlato,V., Masignani,V.,
                                                                                                                                                                                                          Neisseria meningitidis MC58.
Neisseria meningitidis MC58
Bacteria; Proteobacteria; beta subdivision; Neisseriaceae;
                                                                                                                                                                                                                                                                                                                                  Neisseria meningitidis serogroup of the complete genome. AE002520 AE002098
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This sequence was identified as CDM:10210836 by the submitter. For more information on this record e-mail to fly@celera.com.

* NOTE: This is a 'working draft' sequence.

* This sequence will be replaced

* by the finished sequence as soon as it is available and

* the accession number will be preserved.
                                                                                                                                                                                                                                                                                                                   AE002520.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              pieces.
AC017452
                                                                                                                                                                                                 Neisseria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rockville, MD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Submitted (09-DEC-1999) Celera Genomics,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Ins
Pterygota; Neoptera; Endopterygota; Diptera; Brachycera;
Muscomorpha; Ephydroidea; Drosophilidae; Drosophila.
1 (bases 1 to 9366)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Drosophila melanogaster.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Adams, M. and Venter, J.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AC017452.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Drosophila melanogaster,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Direct Submission
                                                                                                                                                                        (bases 1 to 12050)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2736
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HTGS_PHASE2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            D)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /db_x1-
2089 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Drosophila melanogaster"
/db_xref="taxon:7227"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  165
8.00
100.00%
100.00%
6.84%
                                                                                                                                                                                                                                                                                                                 GI:7226947
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GI:6553534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              x AC017452 (1-9366)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2024 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6422
                                                                                                                                                                                                                                                                                                                                                                                                         12050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9366 bp DNA linear HTG 09-DEC-1999 *** SEQUENCING IN PROGRESS ***, in ordered
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels:
                                                                                                                                                                                                                                                                                                                                                                                                           å,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2517 t
                                                                                                                                                                                                                                                                                                                                                                                   ш
                                                                                                                                                                                                                                                                                                                                                                                   DNA lin
strain MC58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      45 West
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9366
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                 ear BCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gude Drive,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Insecta;
                                                                                                                                                                                                                                                                                                                                                                                 162 of 206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE
PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
  SdD
                                                gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tettelin, H., Saunders, N.J., Heidelberg, J., Jeffries, A.C., Retson, K.E., Eisen, J.A., Ketchum, K.A., Hood, D.W., Peden, J.F., Dodson, R.J., Nelson, W.C., Gwinn, M.L., DeBoy, R., Peterson, J.D., Dodson, R.J., Nelson, W.C., Gwinn, M.L., DeBoy, R., Pieischmann, R.D., Hickey, E.K., Haft, D.H., Salzberg, S.L., White, O., Fieischmann, R.D., Dougherty, B.A., Mason, T., Clecko, A., Parksey, D.S., Blair, E., Cittone, H., Clark, E.B., Cotton, M.D., Utterback, T.R., Khouri, H., Qin, H., Vamathevan, J., Gill, J., Scarlato, V., Masignani, V., Pizza, M., Grandi, G., Sun, L., Smith, H.O., Fraser, C.M., Moxon, E.R., Rappuoli, R. and Venter, J.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (17-MAR-2000) The Institute for Genomic Research, Medical Center Dr. Rockville, MD 20850, USA Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Science 287 (5459), 1809-1815 (2000) 20175755
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        strain MC58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rappuoli,R. and Venter,J.C. Complete genome sequence of Neisseria meningitidis serogroup
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10710307
                                                                                                                                                     /product="conserved hypothetical protein"
/protein_id="AAF42042.1"
/protein_id="AAF42042.1"
/protein_id="AAF42042.1"
/db_xref=="70i:7225949"
/translation="MNMKYKDLRDFIAMLEQQGKLKRVAHPISPYLEMTEIADRVLRA
/translation="MNMKYKDLRDFIAMLEQQGKLKRVAHPISPYLEMTEIAYLKEE
EGPALLFENPIKPDGTRYGYFVFLANLEGTPERVAMGWGADGYSKKREIGGTLAYLKEE
EGPALLFENPIKPDGTRYGYFVFLANLEGTPERVAMGWGADGYSKKREITAYLKEE
EPPKGIKDAFSKLPLKDIWSMAPNVYKNAPQCIIGKNKLJMRWLSHRGGALDYQEFRKLNPDTP
EPVAVVLGCDPATILGAVTFYPDTLASBYQFAGLLRGSRTELVKCIGNDLQVFARAEIV
FPVAVVLGCDPATILGAVTFYPDTLASBYQFAGLLRGSRTELVKCIGNDLQVFARAEIV
  /gene="NMB1695"
3857. .4837
                                                                                                                                                                                                                                                                                                                                                                       /note="conserved hypothetical protein; identified
Glimmer2; putative"
/codon_start=1
                                                                                                                                 LEGVIHPNETALEGPYGDHTGYYNEQDYFPVFTVERITMRENPIYHSTYTGKPPDEPA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          complement(2254. .3738)
/gene="NMB1694"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EKQKILEDTLLEQWQWLKPKEP'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAWHGIDMDNILKNGISGKTADNAAPSTPFHRFTLNSEISDGISRHIDTELFSDSLYV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SLNSPLVWTENKGLDAPRLYVSTLQDTVNRLPQPRFISRLDGSLSVPNLQNWNAELNG
TFDRQTVAAKFRYTHEDAPHLEAAVALQKLNLTPYLDDVRQQNGKIFPDTLAKLSGDI
EAHLKIGKVQLPGLQLDDMETYLHADKGHIALSRFKSGLYGGHTEGGISIANTRPATY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HFEASTSLDGHGITISTTGSPSVRFNAGGADAAGLGLRADTSFRNLHLTAQIPALALR
NNSIKIETVNGAFTAGGEYARWDGSFKLDKANLHSGIANIGNAEISGSFKTPRHQTNF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /translation="MDLLSVFHKYRLKYAVAVLTILLLAAVGLHASVYRTFTPENIRS
RLQQSIAHTHRKISFDADIQRRLLPRPTVILKNLTITEPGGDQTAVSVQETKIGLSWK
NLWSDQIQLEKWYVSSAELALTRDGKGVWNIQDLIDSQKRQASVNRIIVENSTVRLNF
                                                                 'GGKMGLDATNKWPGETDREWGRVIKKDPAVTAKIDGIWEELGL"
                                                                                                                                                                                                                                                                                                                                                   /transl_table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                /gene="NMB1694"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    complement(2254. .3738)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TSNGYTNLDTQELSEDVLIRNAVHÞKNKÞIÞLKITGTVDKÞSITVDYGRLTGGINSRK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RLQQNASNIQIQPLLQDLFGFHSFSGNGDAVIDLTAGGETRKELIRSLQGSLSLNISN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   putative'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /product="hypothetical protein"
/protein_id="AAF42041.1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                'db_xref="GI:7226948"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /transl_table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        codon_start=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    note-"hypothetical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /gene="NMB1693"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /gene="NMB1693"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /db_xref="taxon:122586"
/note="serogroup: B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      organism="Neisseria meningitidis MC58"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QEQLILKEINLNLQSPDSSGQPFESSGILVWGKLSVPWKSRGLFLSNGIGPPEISPF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          strain-"MC58"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .12050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein; identified by Glimmer2;
```

bу

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                               SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-092-297-17 (1-117) x AF369910 (1-2350)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HSCALCAC/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       POCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                               AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                     TITLE
JOURNAL
                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                            MEDLINE
          TATA_signal
                                                      protein_bind
                                                                                  misc_feature
                                                                                                               misc_feature
                                                                                                                                                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              582 ATAGTCGCCGTCTTCGCCATCTTT 605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               14 IleValAlaValPheAlaIlePhe 21
                                                                                                                                                                                                                                                                                                                            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 7637)

Broad,P.M., Symes,A.J., Thakker,R.V. and Craig,R.K.

Structure and methylation of the human calcitonin/alpha-CGRP gene

Nucleic Acids Res. 17 (17), 6999-7011 (1989)
                                                                                                                                                                                                                                Submitted (22-JUL-1989) Symes A.J., University College London, Medical Molecular Biology Unit, Windeyer Building, UCMSM, Cleveland street, London WIP 6DB, UK
                                                                                                                                                                                                                                                                                                                                                                                                                                                      alternate splicing; Alu repetitive sequence; calcitonin; calcitonin gene related peptide; hormone; neuropeptide; repetitive sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HSCALCAC 7637 bp
                                                                                                                                                                                                                                                                             Symes, A.J.
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           X15943.1 GI:29613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HSCALCAC
                                                                                                                                                                                                                                                                                                           (bases 1 to 7637)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         707
       /note="c-AMP responsive element"
1666. .1674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SLLALWA"
a 425 c
                                                                                                                 /clone_]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /translation="MASCVTGTEAAIRAAACRDGEEASHLKIVAVFAIFITSVFGVWG
PVLLAKYFHGKPLYDKAILVIKCFAAGVILSTSLVHYLPEARESLADCGVSSRHPWKD
FPFAGLVTMIGAITALLVDLTASEHMGHGGGGGDGGMEYMFVGKAVGGLEHKEGKCG
ADLEIOENSEEEIVKKKGRLVSQVLEIGIIFHSVIIGVTMGMSQNKCTIRPLIAALSG
HOIFEGLGLGGCIAQAGFKAGTVVYMCLMFAVTTPLGIVLGMVIFAATGYDDQNPNAL
IMEGLIGSFSSGILIYMALVDLIALDFFHNKMLTTCGESGSRLKKLCFVALVLGSASM
                                                                                                                                                         /organism="Homo sapiens"
/db_xref="taxon:9606"
/chromosome="11"
                                                                  'note="octamer element"
                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /product="putative metal transporter
/protein_id="AAL38433.1"
/db_xref="GI:17385786"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   'product="putative metal transporter
oin(501. .1199,1557. .1883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  oin(<501. .1199,1557.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  db_xref="taxon:3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              organism="Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              44.1
8.00
                                                                                                                           lib-"cosmid HPB-ALL cos 202"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels:
                                                                                                                                                                                                                                                                                                                                                                                           Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       743
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2350
8
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ZIP6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ZIP6"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25-JUN-1997
                                                                                                                        BASE COUNT
ORIGIN
                  Percent Similarity:
Best Local Similarity:
Query Match:
                                                             Score:
                                                                               Pred. No.:
                                                                                           Alignment Scores:
                                                                                                                                                                                   exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                         exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gene
                                                                                                                                                                                                                                                                          exon
                                                                                                                                                                                                                                                                                                                                                               exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mat_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            prim_transcript
                                                                                                                                                                                                                               intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        exon
                                                                                                                                                                                                                                                                                                                    intron
                                                                                                                                                                                                                                                                                                                                                                                                            intron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             intron
                                                                                                                                        1843
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /product="calcitonin"
1834. .7515
/gene="CGRP"
                                                                                                                                                                                                                             /note="exon 5, 6511. .7084
                                                                                                                                                                                /note="intron 5"
7085. .7515
                                                                                                                                      /note="exon
1939 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db_xref="SWISS-PROT:P06881"
//translation="MGFQKFSPFLALSILVILQAGSLHAAPFRSALESSPADPATLSE
DEARLLLAALVODYVQMKASELEOGEREGSRIIAQKRACDTATCVTHRLAGLLSRSG
GYVKNNFVPTNVGSKAFGRRRRDLQA"
                                                                                                                                                                  'gene="CGRP"
                                                                                                                                                                                                              'gene="CGRP"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /gene="CGRP"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          join(1834.
7085. .7515
                                                                                                                                                                                                                                                          gene="CGRP"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        product="cgrp propeptide"
protein_id="CAA34070.1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               note="calcitonin/CGRP
oin(1834. 1940,2983.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 note-"Alu repeat"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 note-"intron II"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gene-"cgrp"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gene="cgrp"
product="calcitonin"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gene="CGRP
                                                                                                                                                                                                                                                                        note="intron IV"
330. .6510
                                                                                                                                                                                                                                                                                                      gene-"CGRP"
                                                                                                                                                                                                                                                                                                                                                                                                           note="exon 3, common"
249. .5187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           oin(3067. .3077,4108.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         oin(3067.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  oin(2992. .3077,4108. .4248,6330. gene="CGRP"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            note="j
    136
8.00
100.00%
100.00%
6.84%
9
                                                                                                                                                                                                                                                                                                                    ote="exon 4, specific 83. .6329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             note="exon 1,
)42. .2982
                                                                                                                                                                                                                                                                                                                                                                             ote="intron III"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            _xref-"SWISS-PROT:P01258"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            _xref="GI:296638"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .3568
                                                                                                                                                                                                                                                                                                                                                                 . 5682
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .7515)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            intron I"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .3077,4108.
                                                                                                                                      6"
1922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .1940,2983.
                                                                                                                                                                                                                                         specific
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      common"
                                                                                                                                      φ
Length:
Matches:
Conservative:
Mismatches:
Indels:
Gaps:
                                                                                                                                      1933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gene transcript"
.3077,4108. .4248,5188.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .4248,5188.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .3077,4108. .4248,5188.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .4248,5188.
                                                                                                                                                                                                                                                                                                                               6
                                                                                                                                                                                                                                           6
                                                                                                                                                                                                                                                                                                                               preprocalcitonin"
    0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   . 6489)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .5682,
```

```
REFERENCE
AUTHORS
TITLE
                                      US-09-092-297-17 (1-117) x AX309824 (1-373)
                                                                         Query Match:
                                                                               Percent Similarity:
Best Local Similarity:
                                                                                                         Score:
                                                                                                                     Pred. No.:
                                                                                                                            Alignment Scores:
                                                                                                                                                     ORIGIN
                                                                                                                                                               BASE COUNT
                                                                                                                                                                                                                                                                                              SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                         RESULT 10
AX309824/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-092-297-17 (1-117) x G00569 (1-329)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        primer_bind
primer_bind
BASE COUNT
                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                               /ERSION
                                                                                                                                                                                                                                                                                                                                            CCESSION
                                                                                                                                                                                                                                                                                                                                                                  Spoor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                     103
 41
                                                                                                                                                                                                                                                                                                                                                                                                           64
                  AspSerAlaArgThrSerAspAsp 110
GACTCTGCCCGTACTTCTGATGAC 18
                                                                                                                                                                                                                                                                                                                                                                                                         TCTCATGGTGCACCTGTAGCACCG
                                                                                                                                                                                                                                                                                                                                                                                                                             SerHisGlyAlaProValAlaPro 36
                                                                                                                                                                                                                                                                                                                                          Sequence
AX309824
                                                                                                                                                                                                                  Curagen
                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                           Human polynucleotides and polypeptides Patent: WO 0190366-A 2809 29-NOV-2001;
                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                               AX309824.1
                                                                                                                                                                                                                                                                                                                                                               AX309824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Center.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          P-element stocks should be obtained from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Buffer:
                                                                                                                                                                                                                                                  Leach, M.D. and Shimkets, R.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            109
                                                                                                                                                               94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Taq Poly:
Total Vol:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gelatin:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tris-HCl:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MgC12:
                                                                                                                                                                                                      Corporation (US)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ω
                                                                                                                                                                                                                                                                                                                                                   373 bp · I
2809 from Patent W00190366.
                                                                                                                                                          /organism="Homo sapiens"
/db_xref="taxon:9606"
105 c 97 g 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       complement(180. .20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Drosophila melanogaster"
/db_xref="taxon:7227"
                                                              100.00%
100.00%
6.84%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6.75
8.00
100.00%
100.00%
6.84%
                                                                                                                                                                                                                                                                                                                               GI:17896142
                                                                                                         . 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1:5mM
50 mM
50 mM
8.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0.05 units/ul
15 ul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               001 %
                                                                                                                                                                                                                                                                                                                                                                                                          41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .201)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
Conservative:
                                                                                                       Matches:
                                                                                  Mismatches
                                                                                            Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches:
                                                                          Indels:
                                                                                                                                                                                                                                                                       Craniata; V
Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          106
                                                                                                                                                             76
                                                                                                                                                             c
                                                                                                                                                                                                                                                                                                                                                             DNA
                                                                                                                                                                                                                                      encoded thereby
                                                                                                                                                                                                                                                                     Vertebrata; Euteleostomi;
i; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       the
                                                           373
0
0
                                                                                                                                                            1 others
                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        U
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Drosophila
                                                                                                                                                                                                                                                                                                                                                            PAT 14-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Stock
                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                          Š
                                                                                                                                                                                          SOURCE
                                                                                                                                                                                                                                                           LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                 Score
```

δÃ

망

Š 밁

```
PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                        REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 12
AF369910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 11
AF320338/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-092-297-17 (1-117) x AF320338 (1-792)
                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                          JOURNAL
MEDLINE
                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  rRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 ProLeuGlnProProArgAlaMet 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCTCTGCAACCTCCGAGGGCCATG 259
                                  2 (bases 1 to 2350)
Kim, S.A. and Guerinot, M.L.
Direct Submission
                 Submitted
                                                                                                                                                                                            Maser,P., Thomine,S., Schroeder,J.I., Ward,J.M., Hirschi,K., Sze,H., Talke,I.N., Amtmann,A., Maathuis,F.J., Sanders,D., Harper,J.F., Tchieu,J., Gribskov,M., Persans,M.W., Salt,D.E.
                                                                                                                                            Arabidopsis
                                                                                                                                                                               Harper, J.F., Tchieu, J., Gribskov, M.,
Kim, S.A. and Guerinot, M.L.
                                                                                                                                                                                                                                                   Eukaryota, Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae; eurosids II, Brassicales; Brassicaceae; Arabidopsis.

1 (bases 1 to 2350)
                                                                                                                                                                                                                                                                                                                               Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                                                                                        Arabidopsis thaliana putative metal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 (bases 1 to 792)
Boomer, S.M., Dutton, B.E. and Lodge, D.P.
Direct Submission
Submitted (09-NOV-2000) Dept. of Biology,
University, 345 Monmouth Ave., Monmouth, C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   792 bp DNA linear BCT 24-JAN Uncultured alpha proteobacterium rcr_1 16S ribosomal RNA gene, partial sequence.
                                                                                                                         Plant Physiol. 126 (4),
                                                                                                                                                            Phylogenetic relationships within cation transporter families
                                                                                                                                                                                                                                                                                                                                                 thale cress.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 (bases 1 to 792)
Boomer,S.M., Dutton,B.E.
Diversity of novel green
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bacteria; Proteobacteria; alpha subdivision;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               uncultured alpha proteobacterium rcr_1.uncultured alpha proteobacterium rcr_1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AF320338.1 GI:12407987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unpublished
d (05-APR-2001) Department of Biology, Dartmouth College, NH 03755, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /country="USA: Rabbit Creek,
complement(<1. .>792)
/product="16S ribosomal RNA"
233 c 204 g 189 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="uncultured alpha proteobacterium rcr_1"
/db_xref="taxon:148390"
/clone="rcr_1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                     GI:17385785
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15.6
8.00
100.00%
100.00%
6.84%
                                                                                                                           1646-1667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       and Lodge, D.P.
non-sulfur bacteria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ф
                                                                                                                                                                                                                                                                                                                                                                                                                                      transporter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Yellowstone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ဝ္ဘ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Western Oregon
DR 97361, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          environmental samples.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         from
                                                                                                                                                                                                Salt, D.E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                       PLN 06-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BCT 24-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                 gene, complete
                                                                                                                                                            of.
```

124136:

gap of

FEATURES

Locat

'db\_xref="taxon:9| 'chromosome="UNK"

169756 187712

155382 155482 .69656

source

misc\_feature

.12466

.15498

misc\_feature misc\_feature

ector\_side;left"

one\_end:T7

misc\_feature

misc\_feature misc\_feature misc\_feature misc\_feature misc\_feature misc\_feature misc\_feature

.35604

25410

.43181

.52445

61855

.47486

```
'note="assembly_name:Contig33"
        'note="assembly_name:Contig34"
.15032. .124036
                                                                                                                                                                                                                                          note-"assembly_name:Contig29"
                                                                                                                                                                                                                                                                               note="assembly_name:Contig28"
                                                                                                                                                                                                                                                                                                                           note-"assembly_name:Contig27"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="assembly_name:Contig10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                note="assembly_name:Contig30'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         note-"assembly_name:Contig22'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             note="assembly_name:Contig20"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  note="assembly_name:Contig14'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    note="assembly_name:Contig12"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              clone="RP11-1245A23"
                                                                                                            e-"assembly_name:Contig32
                                                                                                                                                                                                                                                                                                                                                                                                                                                     e-"assembly_name:Contig24"
                                                                                                                                                        = "assembly_name:Contig31
                                                                                                                                                                                                                                                                                                                                                                     e="assembly_name:Contig26"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               e-"assembly_name:Contig23"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                e="assembly_name:Contig21"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       e="assembly_name:Contig19"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           e="assembly_name:Contig15"
9. .19057
                                                                                                                                                                                                                                                                                                                                                                                                             ="assembly_name:Contig25"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        e="assembly_name:Contig17"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                - assembly_name:Contig16"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "assembly_name:Contig18"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   )5806: gap of unknown length
)8999: contig of 23193 bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              assembly_name:Contig11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ssembly_name:Contigl3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5: gap of unknown length
g: contig of 9444 bp in length
g: gap of unknown length
l: contig of 11492 bp in length
l: contig of 11497 bp in length
c: contig of 14174 bp in length
gap of unknown length
gap of unknown length
l: contig of 17956 bp in length
l: contig of 17956 bp in length
c: contig of 17995 bp in length
l: gap of unknown length
l: contig of 17995 bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 unknown length of 10109 bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              length
                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 9
G00569/c
                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Db 145812 GCTGTCTTTGCCATATTCTGCATTTCA 145838
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-092-297-17 (1-117) x AC083885 (1-228999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Locus
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16 AlaValPheAlaIlePheCysIleSer 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STS; STS sequence; primer; sequence tagged site.

fruit fly vector=PZ[ry, lac2] STS's whose source is listed as a Spradling P-element screen are obtained from plasmid rescues of P-element stocks from a P-element lethal screen (see Karpen and Spradling, Genetics 132: 737). The number in parentheses in the clone name designates the chromosome the P-element is on. Genetic characterization of these P-element insertions was done in A. Spradling's lab; these P-element insertions was done in A. Spradling's lab; these P-element insertions each inactivate a different essential genetic locus. The chromosomal location of the
                                                                                                                                                 Primer A: CAGGTGCACCATGAGAAATA
Primer B: AATTTGATTTTTGGAATCAACA
STS size: 153
                                                                                                                                                                                                                      Contact:
Berkeley Drosophila Genome Project
                                                                                                                                                                                                                                                                                                 Drosophila STS
Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                           different essential genetic locus. The chromosomal location of the P-element insertion was mapped by T. Laverty in G.Rubin's lab. STS's were generated by plasmid rescue and sequencing of the genomic region immediately flanking the P-element insertion site, by the W. Kimmerly, C. Martin, and M. Palazzolo lab at LBL.
                                                                    Protocol:
                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta; Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha; Ephydroidea; Drosophilidae; Drosophila.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        329 bp DNA linear STS 28-fruit fly STS Dm0281 clone 1(3)03576, sequence tagged site. G00569
                                                                                                                                  PCR Profile:
                                                                                                                                                                                                                                                                                                                                                                                                                                                by the W. Kimmerly, C. Drosophila melanogaster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    G00569.1 GI:683973
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           71893
                                                                                                                                                                                                                                                                                                                                                            (bases 1 to
                                                                               Annealing:
PCR Cycles:
  Primer: dNTPs:
                                            Template:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ....c- assembly_name:Contig36"
134346. .143789
/note-"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note="assembly_name:Contig42"
40635 c 40440 g 72819 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   'note≖"assembly_name:Contig41"
?05807. .228999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               187812. .205706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             143890. .15538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="assembly_name:Contig35"
124137. .134245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            note="assembly_name:Contig40"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         69756. .18771
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      note-"assembly_name:Contig39"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   55482. .169655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                note="assembly_name:Contig38"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          note="assembly_name:Contig37"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        248
9.00
                                                                                      30
30
Pl Library Pools
1 uM each
250 uM each
                                                                                                       degrees C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3212 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         228999
9
0
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STS 28-FEB-1995
```

misc\_feature misc\_feature misc\_feature

misc\_feature misc\_feature

misc\_feature misc\_feature misc\_feature misc\_feature misc\_feature misc\_feature misc\_feature misc\_feature misc\_feature

> .71594 .66545

```
REFERENCE
AUTHORS
                                                                                                                                                                          REFERENCE
AUTHORS
                                                                                                                                                                                                                   KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                              RESULT 8
AC083885
LOCUS
                                                                                                                                                                                                                                                                                                                                                                             US-09-092-297-17 (1-117) x AC034170 (1-180563)
                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment
Pred. No.:
                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                     TITLE
JOURNAL
                                                                                                           TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                        90512
                                                                                                                                                                                                                                                                                                                                   Scores:
          Center: Washington University Genome Sequencing Center code: WUGSC
Web site:http://genome.wustl.edu/gsc/index.shtml
Project Information
                                                                          Direct Submission
Submitted (04-OCT-2000) Genome Sequencing Center, Washington University School of Medicine, 4444 Forest Park Parkway, St. MO 63108, USA
On Oct 30, 2000 this sequence version replaced g1:11024957.
                                                                                                                                                                                                                                                          228999 bp DNA lines
Homo sapiens chromosome UNK clone RP11-1245A23,
SEQUENCE, 33 unordered pieces.
                                                                                                                               2 (bases 1 to 228999) Waterston, R.H.
                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 228999)
Center project name: H_NH1245A23
                                                                                                                                                                           Waterston, R.H.
                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                     AC083885.3 GI:11038707
HTG; HTGS_PHASE1; HTGS_DRAFT.
                                                                                                                                                             The sequence of Homo sapiens clone
                                                                                                                                                                                                                               human,
                                                    ----- Genome Center -----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         125797
128623
128723
131945
131945
135045
135331
135431
135431
138632
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  108636
111169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100395
100495
102563
102663
105608
105708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        119937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     119837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14041
                                                                     2000 this sequence version replaced gi:11024957
                                                                                                                                                                                                                                                                                                                                                                                                             198
9.00
100.00%
100.00%
7.69%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          138731:
143021:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  gap of contig gap of contig gap of contig gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gap of contig gap of contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      contig
gap of
contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gap of contig gap of contig gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                conti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gap of
                                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                f unknown
y of 3222
f unknown
y of 3286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               f unknown
g of 2945
f unknown
g of 2828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            unknown
of 2826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  unknown
of 2507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       unknown
of 3153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            unknown
of 2663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     f unknown
of 2772
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           f unknown
Jof 2533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          unknown
of 2068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 of 2933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        length
bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     length
bp in ]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  tength
bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   length
bp in 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               length
bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        length
bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        length
bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           length
bp in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                bp in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       length
                                                                                                                                                                                                                                                                                                                                                                                                  180563
9
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    length
                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                WORKING
                                                                                                                                                                                                                                                                               30-OCT-2000
DRAFT
                                                                                             Louis,
```

Score:

COMMENT

bp in length

/ERSION

```
Sequencing vector: M13; 100%
Sequencing vector: M13; 100%
Sequencing vector: plasmid; 0%
Chemistry: Dye-primer ET; 100% of reads
Chemistry: Dye-terminator Big Dye; 0% of reads
Assembly program: Phrap; version 0.990319
Consensus quality: 214460 bases at least Q40
Consensus quality: 219291 bases at least Q30
Consensus quality: 221570 bases at least Q20
Insert size: 214000; agarcose-fp
Ouality coverage: 4.55 in Q20 bases; agarose-fp
Quality coverage: 4.55 in Q20 bases; sum-of-contigs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NOTE: This is a 'working draft' sequence. It currently consists of 33 contigs. The true order of the pleces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs of N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.
  85424
85524
91962
92062
92062
98645
98745
105873
105873
115973
                                                                                                                                                                                                      1993
2093
3781
3881
6455
6455
6455
9844
12467
112567
112567
112569
119058
119058
129101
122201
22201
22201
22201
225411
225411
225411
225411
225411
225411
22541
22541
22541
22541
22541
22541
22541
22541
22541
22541
22541
22541
22541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25541
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
2554
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
2554
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
2554
25544
25544
25544
25544
25544
25544
25544
25544
25544
25544
2554
                                          114931
                                                             10587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3880: gap of
6354: contig
6454: gap of
9843: contig
9943: gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1992: contig
2092: gap of
3780: contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .2566: 'gap o
86: gap o

45: conti

45: conti

5: conti

5: conti

5: conti

6: conti

7: conti

9: conti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 b: gap c
: conti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       contig
gap of
contig
gap of
contig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gap of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             gap c
                                                                                                                      unknown
of 6583
                                                                                                                                                                                                      unknown
of 6703
                                                                                                                                                                                                                                                                                    of 4949
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           unknown
of 3459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         of 4205
                                                                                                                                                              of 6438
                                                                                                                                                                                                                                                                                                                                                                     of 4559
                                          of 8959
                                                                                                                                                                                     unknown
                                                                                                                                                                                                                                              of 6926
                                                                                                                                                                                                                                                                 unknown
                                                                                                                                                                                                                                                                                                                                 of 4590
                                                                                                                                                                                                                                                                                                                                                                                                                                                     of 4859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 of 4598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      of 2932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of 2523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      of 3389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of 1992
                                                                                                                                                                                                                                                                                                                                                                                                             of 4651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       of 2943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    of 1688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5396
                6 bp in length
a length
a length
a length
bp in length
bp in length
bp in length
bp in length
b in length
be in length
length
length
bp in length
bp in length
bp in length
                                                                                                                                                                                                                                                             bp in length
length
bp in length
                                                                                                                                                                                                                                                                                                                                                                                   bp in length
he length
bp in length
he length
he length
length
length
length
length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        bp in 1 length bp in 1 length length bp in 1 length length length length length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    bp in length bp in length
                                                                                                                                                                                                                                                                                                                                               bp in l
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  bp in length
length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      bp in l
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     bp in
length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              bp in length
length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ďď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   bp in length
length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     in length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  in length
                                                                                                                                                                                                                                                                                                                                                                length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          length
```

21392 21492 22510 22510 23610 23648 23748 23748 24975 26975 26075 26175 27516 27516 27516 27529 28529 29683	arbitrary. Gaps between the contigs are represented as runs of N. buf the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved.  1	Center project name: H_NH0574J05  * NOTE: This is a 'working draft' sequence. It currently  * consists of 89 contigs. The true order of the pieces  * ig not known and their order in the sequence.
-		
* * * * * * * * * * * * * * * * * * * *	********************	. * * * *
* * * 90991 * 80991 * 82976 * 82976 * 83076 84927 87555 87655 87655 87655 87655 87655 90663 90663 92287 92387 92352 95352 97721	**************************************	* 29684 * 30742 * 30842 * 31990 * 32090

```
FEATURES
             repeat_region
                                           repeat_region
                                                                           repeat_region
                                                                                                           repeat_region
                                                                                                                                         repeat_region
                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                         source.
                                                                                                                                                                                                                                                                                        Version:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Position 67598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99512
103635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OWALITY OF INDIVIDUAL BASES: This sequence meets stringent quality standards - estimated error rate less than 1 per 10,000 bases. Reports of lowest quality individual bases and measures of base quality are listed below. Description of the metrics can be found at URL: http://gc.bcm.tmc.edu:8088/quality.info/genbank.annotation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               106704
106705
106713
117425
160258
169390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Average error rate (BCM Phrap estimate): Fraction of Phrap values less than 40: Number of consensus changing edits: Number of N's in consensus:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           103636
103660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Contig Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QUALSTAT - REPORT - - -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Phrap values in estimate:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    bases
                                                                                                       complement(7.342)
/rpt_family='MLT2CA'
complement(674.798)
/rpt_family='MIR'
complement(799.835)
                                                                                                                                                                                                                                                                                                                                                                                                   1000
900
800
700
600
500
400
300
200
100
                                    /rpt_family="MIR"
913. .957
           /rpt_family="(TC)n"
1986. .2007
                                                                                                                                                                                                                                                                                          1.01
                                                                                                                                                                                                        /organism="Homo sapiens"
/db_xref="taxon:9606"
/chromosome="12"
                                                                                                                                                                                      /clone="RP11-900F13"
                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Distribution of Quality < 40 Bases
                                                            vt_family="L1PA5"
olement(836, .852)
-_family=""L1PA5"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cttaacttat(n)aatgctgtag
acactctgct(n)atctgcctgg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         atattaccta(a)taaaaatnta
taataaaaat(n)tatgcttagt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              agactgaaat(t). .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ctctgactcc(c)tagcttagtg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tatattacct(a)ataaaaatnt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      aaagactgga(n)ccaggattgg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ggcatgggtg(n)nacaggcccc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ctctttgaaa(n)tattatattg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ttctagacag(n)aatgacaata
                                                                                                                                                                                                                                                                                       qxfo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Original+Context
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Summary Statistics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Consensus changing edits
                                                                                                                                                                                                                                                                                                                                                                    10
                                                                                                                                                                                                                                                                                                                                                 15 20 25
Phrap Value Range
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Edited+Context
ttctagacag(c)aatgacaata
ctctttgaaa(c)tattatattg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          acactctgct(c)atctgcctgg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ctctgactcc(t)tagcttagtg
cttaacttat(a)aatgctgtag
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         atattacctt(t)taaaaattta
ttttaaaaat(t)tatgcttagt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       aaagactgga(a)ccaggattgg
tatattacct(t)ttaaaaattt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gcatgggtgc(a)acaggcccca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ggcatgggtg(c)aacaggcccc
                                                                                                                                                                                                                                                                                                                                                                30
                                                                                                                                                                                                                                                                                                                                                                  35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           caagactgaa(t)tc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  172246
171130
2.13165e-05
0.00600713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          agactgaatt(c).
                                                                                                                                                                                                                                                                                                                                                                40
                                                                                                                                                                   JOURNAL
REFERENCE
AUTHORS
                                                                                                                                                                                                                 REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                               SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 7
AC034170/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                             ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Db 130738 TTTTGCATTTCTCGTCTTCTCTGCTCA 130712
                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-092-297-17 (1-117) x AC024941 (1-172246)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alignment Scores:
                                                                                                                                    TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21 PheCysIleSerArgLeuLeuCysSer 29
                                                                                MO 63108, US
On Apr 20,
                                                                                                2 (bases 1 to 180563)
Waterston,R.H.
Waterston,R.H.
Direct Submission
Submitted (04-APR-2000) Genome Sequencing Center, Washington
University School of Medicine, 4444 Forest Park Parkway, St.
MO 63108, USA
                    Center: Washington University Center code: WUGSC
                                                                                                                                                                                              Unpublished
                                                                                                                                                                                                                              1 (bases 1 to 180563)
Waterston, R.H.
                                                                                                                                                                                                                                                                                                                                                                       AC034170 180563 bp DNA 1:
Homo sapiens chromosome 12 clone RF11-674J5,
PROGRESS ***, 89 unordered pieces.
                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria, Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                 The sequence of Homo sapiens clone
                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                               HTG; HTGS_PHASE1.
                                                                                                                                                                                                                                                                                                                                                                AC034170
                                                                                                                                                                                                                                                                                                                                            AC034170.3 GI:7622528
site:http://genome.wustl.edu/gsc/index.shtml
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /rpt_family="AT_rich"
complement(13240. .13408)
/rpt_family="MER63A"
14596. .14950
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  complement(10863. .11134)
/rpt_family="L2"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /rpt_family="AluJo"
complement(8659. .8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /rpt_family="L1HS"
complement(7229. .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /rpt_family="(TTTTG)n"
complement(6046. .7170)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             complement (5766.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /rpt_family="(TTTG)n"
complement(2347. .262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /rpt_family="Aluy"
complement(5766
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /rpt_family="AT_rich"
2317. .2346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /rpt_family-"L2"
                                                                           2000 this sequence version replaced gi:7579885
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'rpt_fami
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               rpt_family="MSTA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             'rpt_family="MSTA"
004. KAAF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      189
9.00
100.00%
100.00%
7.69%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         _tamily="L1HS"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 _family="MER5A"
                                                     Genome Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ly-"L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                . 8759)
                                   Genome Sequencing Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      172246
                                                                                                                                                                                                                                                                                                                                                                                    linear HTG ZU-,
                                                                                                                                                                                                                                                                                                                                                                                                         HTG 20-APR-2000
```

Louis,

```
VERSION
KEYWORDS
                                                                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Db 15848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-092-297-17 (1-117) x HSAC002069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                    AC024941/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                       Snoor
                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        16 AlaValPheAlaIlePheCysIleSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCTGTCTTTGCCATATTCTGCATTTCA 15822
Allen,C.,
Allen,C.,
Allen,C.,
Allen,C.,
Allen,C.,
Alsbrooks,S.L.,
Amaratunge,H.C.,
Are,J.R.,
Banks,T.,
Banks,T.,
Barbaria,J.,
Benton,J.,
Bende,K.,
Benkanburg,K.,
Bonnin,D.,
Bouck,J.,
Bowie,S.,
Brieva,M.,
Brown,E.,
Brown,M.,
Bryant,N.P.,
Buhay,C.,
Burcetl,K.L.,
Byrd,N.C.,
Carron,T.F.,
Carter,M.,
Cavazos,S.R.,
Chacko,J.,
Chavez,D.,
Chen,G.,
Chen,R.,
Chowlary,I.,
Christopoulos,C.,
Cleveland,C.D.,
Cox,C.,
Coyle,M.D.,
Dathorne,S.R.,
David,R.,
Davila,M.L.,
Davis,C.,
Davy-Carroll,L.,
Dederich,D.A.,
Denn,A.L.,
Ding,Y.,
Dahh,H.H.,
Douthwalte,K.J.,
Draper,H.,
Dugan-Rocha,S.,
Durbin,K.J.,
Earnhart,C.,
Edgar,D.,
Edwards,C.C.,
Elagar,D.,
Escotto,M.,
Falls,T.,
Ferraguto,D.,
                                                                                                                                                                                                                                                                                                                                                                             AC024941 172246 bp DNA linear F
Homo sapiens 12 BAC RP11-900F13 (Roswell Park Cancer
                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteléostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                               AC024941.30 GI:14669928
                                                                                                                                                                                                                                                                                                                                                            Human BAC Library) complete sequence.
                                                                                                                                                                                                                    (bases 1 to 172246)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                93896
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /rpt_fa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                complement (99131.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             complement (95512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            84599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             84400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /rpt_family="L1"
83744. .83767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /rpt_family="ALU"
107834. .107888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /rpt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /rpt_family="L1"
complement(85751.
/rpt_family="L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rpt_family="L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                rpt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.00%
100.00%
7.69%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .
00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    _famı
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               _family-"L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          _family="ALU"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                _family="L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    _family="L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   _fami
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           _famil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     _family="Ll"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            family-"ALU"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             family-"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              _famil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               84452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Y-"L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Y-"L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   y="L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              y-"L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (1-158537)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .95708)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       , 85835)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             158537
9
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                               PRI 11-JUL-2001
```

ş

```
Martindale, A., Martinez, E., Massey, E., Mawhiney, E., McLeod, M. P., Meador, M., Mei, G., Merscher, S., Metzker, M., Miller, A., Miner, G., Miner, Z., Mitchell, T., Mohabbat, K., Montgomery, K.T., Morgan, M., Morris, S., Moser, M., Meal, D., Nelson, D., Newtson, J., Newtson, N., Nguyen, A., Nguyen, N., Nickerson, E., Nwokenkwo, S., Oyuh, M., Okwuonu, G., Oragunye, N., Oviedo, R., Pace, A., Payton, B., Peerry, J., Peters, L., Pickens, R., Primus, E., Pu, L.L., Quiles, M., Ren, Y., Rives, M., Rojas, A., Rojubokan, I., Rolfe, M., Shoshtari, N., Sisson, I., Sodergren, E., Sonaike, T., Sparks, A., Stanley, H., Stone, H., Sutton, A., Svatek, A., Tabor, P., Tamerisa, A., Tamerisa, K., Tang, H., Tansey, J., Taylor, C., Taylor, T., Telfrod, B., Thomas, N., Thomas, S., Ward, M., Vasquez, L., Vera, V., Villalon, D., Vinson, R., Wall, R., Wang, S., Ward, Moroe, S., Warren, R., Washington, C., Watlington, S., Williams, G., Williams, G., Kucherlapati, R. and Gibbs, R.
CLONE LENGTH: This sequence does not necessarily represent the entire insert of this clone. Overlapping regions of clones are c sequenced and submitted once, so the sequence for the remainder the insert may be found in the record for the adjacent clones.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Direct Submission
Submitted (11-JUL-2001) Human Genome Sequencing Center, Dep of Molecular and Human Genetics, Baylor College of Medicine Baylor Plaza, Houston, TX 77030, USA
On Jul 11, 2001 this sequence version replaced g1:13492990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Direct Submission
Submitted (03-MAR-2000) Human Genome Sequencing Center, Depar of Molecular and Human Genetics, Baylor College of Medicine, Baylor Plaza, Houston, TX: 77030, USA
3 (bases 1 to 172246)
Worley, K.C.
                                                                                                                                                                                                                                                                                                                                                                                           gc-help@bcm.tmc.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .Worley, K.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Howard, S., Huber, J., Hulyk, S., Hume, J., Ioshikhes, I., Jackson, L.E., Jackson, B., Jia, Y., Johnson, R., Jollvet, S., Joudah, S., Karlsson, E., Kelly, S., Khan, U., King, L., Kovah, J., Kovah, J., Kovah, J., Kureshi, A., Landry, N., Leal, B., Lee, E., Lewis, L.C., Lewis, L., Li, Z., Lichtarge, O., Lieu, C., Liu, J., Liu, W., Loulseged, H., Lozado, R.J., Lu, X., Lucier, A., Lucier, R., Luna, R., Ma, J., Maheshwari, M., Mapua, P., Marondel, I., Martin, R., Marondel, J., Marchall, J., Marchall, J., Marondel, J., Marchall, J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Garcia,A., Garner,T., Garza,N., Gill,R., Gorrell,J.H., Guevara,W., Gunaratne,P., Hale,S., Hamilton,K., Han,J., Harris,C., Harris,K., Hart,M., Havlak,P., Hawes,A., Hernandez,J., Hernandez,O.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hodgson, A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (bases 1 to 172246)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hogues, M., Holloway, C., Hollins, B., Homsi, F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      http://www.hgsc.bcm.tmc.edu/
                                                                                                                                                                                                                                                                                                                                                                                                                                                      or email
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Medicine,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Department
                                                                                                                                                         only
```

TITLE JOURNAL REFERENCE

COMMENT

REFERENCE TITLE JOURNAL

AUTHORS

JOURNAL TITLE

AUTHORS

Overlapping clones are noted at the beginning and end of the Features listing.

ANNOTATION OF FEATURES:

STSs are identified using ePCR (Genome Res. 7:541-550) searches of a local database that includes entries from dbSTS, GDB, and local mapping efforts.

Repeats are identified using RepeatMasker (A. Smit and P. Green, unpublished.) for Human and Mouse sequences:

Genes and Region of sequence similarity are identified by BLAST (Nuc. Acids Res. 25:3389-3402) similarity (expect < 1e-34) to the EST and cDNA sequences. Genes demonstrate at least two exons flanked by consensus splice sites that maintained sequence continuity across the splice junctions. Sequences that are not identical matches are annotated as similar.

SEQUENCING READ COVERANCE SEQUENCE. The a minimum of 2 clones and 2 standard of double strand coverage with a minimum of 2 reads with no ambiguittes or 2 chemistries with a minimum of 2 clones and 3 reads with no ambiguittes. If the sequence quality for clones and 3 reads with no ambiguittes, if the sequence quality for clones and 3 reads with no ambiguittes. SEQUENCING READ COVERAGE: Sequencing is completed to a minimum standard of double strand coverage with a minimum of 2 clones and 2

```
FEATURES .
                             repeat_region
                                                                                                     repeat_region
                                                                                                                                        repeat_region
                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NEIGHBORING SEQUENCE INFORMATION:
Actual start of this clone is at base position 1 of H_RG326K09;
actual end is at 158537 of H_RG326K09. This clone lies in an
unanchored cluster of unknown orientation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This clone contains swss3233 (NID:g1113712).
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This clone is from a release of the human BAC library. The library contains cloned DNA from a human sperm. For references see: Shizuya et al., Proc. Natl. Acad. Sci. 89:8794-8797 (1992); Kim et al., Genomics 34:213-218 (1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The sequence of this clone was established as part of a mapping and sequencing collaboration between the NHGRI Chromosome 7 Mapping Project and the Washington University Genome Sequencing Center. For additional information about the map position of this sequence, see http://www.nhgri.nih.gov/DIR/GTB/CHR7 or send an E-mail to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This sequence was finished as follows unless otherwise noted: all regions were double stranded or sequenced with an alternate chemistry; an attempt was made to resolve all sequencing problems, such as compressions and repeats; all regions were covered by sequence from more than one subclone; and the assembly was
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Selection:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            egreen@nhgri.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NOTICE: This sequence may not represent the entire insert of this colone. It may be shorter because we only sequence overlapping sections once, or longer because we provide a small overlap between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOURCE INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MAPPING INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                confirmed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             neighboring submissions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PBELO
                                                                                                                                        /rpt_family="L1"
complement(6997.
                                                                                                                                                                                                                                                   /rpt_family-"L1" complement(5236.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           complement(580. .998)
/rpt_family="L1"
                                                                /rpt_family="L1"
/866. .7936
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clone="RG326K09"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
/db_xref="taxon:9606"
/chromosome="7"
                                                                                                                                                                                                                                                                                                          rpt_family="L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     clone_lib="CITB-HS-A"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            by restriction
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        chloramphenicol
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .15853
                                                                                                                      _ramily="ALU"
                                                                                                                                                                                                                                                                                                                                             _family="L1"
                                                                                                                                                                                                                                  family-"L1"
                                                                                                                                                                                                                                                                                                                                                                                                                     _family-"L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                        _family="L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                _family="L1"
                                            family-"L1"
                                                                                                                                                                                                                                                                                                                                                                                _family="L1"
                                                                                                                                                                                                                  .6910
                                                                                                                                                                                           ly-"L1"
                                                                                                                                                                                                                                               .5642)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            digest.
                                                                                                                                      .7223)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                and
repeat_region
                                   repeat_region
                                                                                                           repeat_region
                                                                      repeat_region
                                                                                                                                              repeat_region
                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                            /rpt_family="L1"
complement(65139
                                                                                                                            rpt_family="ALU
                                                                                                                                                                                                                                                                                                                                                                                                                                              /rpt_family="L1"
complement(56184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               complement (47102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    complement(46549.
/rpt_family="MER"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note="Probable retroviral pseudogene. Similar to POL_GALV POL POLYPROTEIN P21414 (NID:g130602)."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   complement(35910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    complement (35884.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  complement (33995. /rpt_family="L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            complement (26748.
/rpt_family="THR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="similar to
zc97d02.r1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       complement(19040.
/rpt_family="L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /rpt_family-"ALU"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               rpt_family="L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           rpt_family="L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note="similar to human EST W56840 (NID:g1358716)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11641.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                'note="Probable pseudogene. Similar to hSRP1alpha U28386
NID:g899538)."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           c97d02.rl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                rpt_family="L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'xpt_family="L1"
.2310. .12397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mplement(17532.
pt_family="L1"
                                                                    _family="L1"
1. .83307
                                                                                                                                                                                                                                                                                                                                                     _fam:
                                                                                                                                                                                                                                                                                                                                                                                        _fam:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               _family="MER"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          _family="L1"
                                                family-"L1"
                                                                                                                                                                                                  family-"L1"
                                                                                                                                                                                                                                         _famil
                                                                                                                                                                                                                                                                            _family="L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   _family="ALU
             family-"ALU
                                                                                                                                                                                                                                                                                                                                                                                                                           _family-"ALU"
                                                                                                                                                                 fami
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 family="MER"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      family-"L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           family-"L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     family-"L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .20388
                                 .83601
                                                                                                           .80438
                                                                                                                                                                                                                                                                                                                                                   Ly-"THR"
                                                                                                                                                                                                                                                                                                                                                                                      ly-"ALU
                                                                                                                                                           ly-"L1"
                                                                                                                                                                                                                                       Y="L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .47052)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .35905)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 human EST W56840 (NID:g1358716)
                                                                                                                                                                                                                                                                                            . 65325)
                                                                                                                                                                                                                                                                                                                                                                                                                                            .56476)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .47157)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .36194)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .34413)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .19066)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .28317)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .17751)
```

```
complement(11536...11661)
/Tpt_family="FLAM_C"
complement(11667...11798)
/Tpt_family="LIMC/D"
complement(11833...12138)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /rpt_family="LIMC/D"
complement(14859, .15153, /rpt_family="".".".")
                                                                                                                                                                                                                                                                                            /rpt_family="Alusq"
complement(18401. .18817)
/rpt_family="LTR7"
                                                                                                                                                                                                                                                                                                                                                                                                                /rpt_family="Alusg"
complement(16691. .17060)
/rpt_family="THEIC"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /rpt_family="AluSg"
complement(12158, .12478\)
/rpt_family=""
                                                                                                                               complement (24403
                                                                                                                                                                                                                                 complement(19194. 19412)
/rpt_family="HERVH"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              complement(14115..14415)
/rpt_family="Aluy"
complement(14417..14849)
                                                                                                                                                          /rpt_family="HERVH"
complement/92667
                                                                                                                                                                                                                        complement(19414.
                                                                                                                                                                                                                                               /rpt_family="HERVH"
complement(1010'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /rpt_family="AluJo"
complement(16257. .16340)
/note="predicted exon, program: grail2exons_human_1.3,
frame: 0, quality: good, score: 63.000"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          complement(14009. .14105)
/rpt_family="LIMC/D"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          complement(13709, .14037)
/rpt_family="L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 complement(13356. .13481)
/rpt_family="(GAAA)n"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              complement(12806. .13106)
/rpt_family="Alusx"
                                                                                                                                                                                                                                                                                                                                                                         /rpt_family="AluJo"
17782. .17870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   complement(13482. .13694)
/rpt_family="AluJb"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       complement(12655. .12795)
/rpt_family="LIMC/D"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       complement(11302. .11517)
/rpt_family="LIMC/D"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /rpt_family="AluSq"
10273. .10347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rpt_family="FRAM"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rpt_family="AluJb"/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     rpt_tami
                                                                                                  __family="MER74"
9. .25090
                                                                                                                                 _family="LTR7"
lement/7//
                                                                                                                                                                                         _family="HERVH"
lement/2007"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      _family="AluSx"
5, .15400
                                                                                                                                                                                                                                                                                                                                                        _family="(GAAA)n"
                                                                                family-"Alusx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          _family="AluJo"
lement(11200)
                        family="AluJb"
                                                      family="L1MD3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      family-"L1MC/D"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LY-"FLAM"
                                                                                           JOURNAL
REFERENCE
AUTHORS
TITLE
                                                                                                                                                       REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                          ACCESSION
VERSION
KEYWORDS
                                                               JOURNAL COMMENT
                                                                                                                                                                                                                             SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                     RESULT 5
HSAC002069/c
                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-092-297-17 (1-117) x AC007193 (1-146180)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores:
                                                                                                                                                                                                                                                                                                                          Snoo
                                                                                                                                                                                                                                                                                                                                                                            .
No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                            Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 158537)
Geisel, C., Beck, C., Smith, A. and Twyman, B.
The sequence of H. sapiens BAC clone RG326K09
Unpublished (1997)
2 (bases 1 to 158537)
Submitted (09-MAY-1997)
Genome Sequencing Center
Department of Genetics, Washington St. Louis, Mo 63108, USA
http://genome.wustl.edu/gsc
e-mail: sapiens@watson.wustl.edu
                                                                                                         2 (bases 1
Waterston, R.
                                                                                                                                                                                                                                                             HTG.
                                                                                                                                                                                                                                                                                                    HSAC002069 158537 bp E
Human BAC clone RG326K09 from 7q21,
                                                                                                                                                                                                                                                                        AC002069
AC002069.1 GI:2076718
                                                                                           Direct Submission
                                                                                                                                                                                                                                              human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /rpt_family="AluJb" complement(30830. .31040) /rpt_family="MIR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note="predicted exon, program: grail2exons_human_1.3,
frame: 2, quality: good, score: 71.000"
complement(29585. .29888)
/rpt_family="Alusg"
30336. .30634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        complement (28733.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      complement(28526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        complement(27125.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /rpt_family="Alusp"
25902. .26069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /rpt_family="Alusc"
complement(28727)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  complement (28359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rpt_family-"AluJo"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   'Tpt_family="AluSg"
omplement(28526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                rpt_family-"AluJ/FLAM"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      rpt_family="AluJo"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           rpt_family="Alusg/x"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    162
9.00
100.00%
100.00%
7.69%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         __(20/33. .28872)
__family="AluJb"
4. 2908"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            __family="Alusx"
6. .28170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     __family="AluJo"
3. .2687<
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     _family="AluSq"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               _fami
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .ly-"AluSx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
Conservative:
Mismatches:
                                           Washington University
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels:
                                                                                                                                                                                                                                                                                                                    DNA
                                                                                                                                                                                                                                                                                         complete sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              146180
```

misc\_feature

repeat\_region

repeat\_region

repeat\_region

repeat\_region

repeat\_region
repeat\_region
repeat\_region
repeat\_region
repeat\_region
repeat\_region
repeat\_region
repeat\_region
repeat\_region
repeat\_region
repeat\_region
repeat\_region
repeat\_region

repeat\_region

repeat\_region repeat\_region

repeat\_region
repeat\_region
repeat\_region
repeat\_region
repeat\_region
repeat\_region
repeat\_region
repeat\_region
repeat\_region
repeat\_region
repeat\_region
repeat\_region

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-092-297-17 (1-117) x AC006262 (1-107573)
                                                                                                                                                                                                                                                                                                                                     SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       \C007193/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                          EFINITION
                                                                                                                                                                                                                                                                                                                                                          EYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores
                    TITLE
                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                82040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         81980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              81920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                81860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ThrGlnThrCysGlyAsnCysThrPheArgValCysPheGluGlnCysCysProTrpThr 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGTTCTACGACCCCTGCAGCACTGTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LysPheTyrAspProLeuGlnH1sCysCysTyrAspAspAlaValValProLeuAlaArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGTCGC 82045
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CysArg 114
                                               Lamerdin, J.E., McCready, P.M., Skowronski, E., Viswanathan, V., Burkhart-Schultz, K.J., Gordon, L., Dias, J., Ramirez, M., Stilwagen, S., Phan, H., Velasco, N., Do, L., Regala, W., Terry, A., Garnes, J., Danganan, L., Erler, A., Christensen, M., Georgescu, A., Avila, J., Liu, S., Attix, C., Andreise, T., Trankheim, M., Amico-Keller, G., Coefield, J., Duarte, S., Lucas, S., Bruce, R., Thomas, P., Quan, G., Kronmiller, B., Arellano, A., Sanders, C., Ow, Thomas, P., Quan, G., Kronmiller, B., Arellano, A., Sanders, C., Ow, Thomas, P., Quan, G., Kronmiller, B., Arellano, A., Sanders, C., Ow, Thomas, P., Quan, G., Kronmiller, B., Arellano, A., Sanders, C., Ow, Thomas, P., Quan, G., Kronmiller, B., Arellano, A., Sanders, C., Ow, Thomas, P., Quan, G., Kronmiller, B., Arellano, A., Sanders, C., Ow, Thomas, P., Quan, G., Kronmiller, B., Arellano, A., Sanders, C., Ow, Thomas, P., Quan, G., Kronmiller, B., Arellano, A., Sanders, C., Ow, Thomas, P., Quan, G., Kronmiller, B., Arellano, A., Sanders, C., Ow, Thomas, P., Quan, G., Kronmiller, B., Arellano, A., Sanders, C., Ow, Thomas, P., Quan, G., Kronmiller, B., Arellano, A., Sanders, C., Ow, Thomas, P., Quan, G., Kronmiller, B., Arellano, A., Sanders, C., Ow, Thomas, P., Quan, G., Kronmiller, B., Arellano, A., Sanders, C., Ow, Thomas, P., Quan, G., Kronmiller, B., Arellano, A., Sanders, C., Ow, Thomas, P., Quan, G., Kronmiller, B., Arellano, A., Sanders, C., Ow, Thomas, P., Quan, G., Kronmiller, B., Arellano, A., Sanders, C., Ow, Thomas, P., Quan, G., Kronmiller, B., Arellano, A., Sanders, C., Ow, Thomas, P., Quan, G., Kronmiller, B., Arellano, A., Sanders, C., Ow, Thomas, P., Quan, G., Kronmiller, B., Arellano, A., Sanders, C., Ow, Thomas, P., Quan, G., Kronmiller, B., Arellano, A., Sanders, C., Ow, Thomas, P., Quan, G., Kronmiller, B., Arellano, A., Sanders, C., Ow, Thomas, P., Quan, G., Kronmiller, B., Arellano, A., Sanders, C., Ow, Thomas, P., Quan, G., Kronmiller, B., Arellano, A., Sanders, C., Ow, Thomas, C., Charles, C., Charles, C., Charles, C., Charles, C., Charles
       Thomas,P., Quan,G., Kronmiller,B., Arellano,A., Nolan,M., Trong,S., Kobayashi,A., Olsen,A.S. and Sequence analysis of a 1.9 Mb region in 19q13.2
                                                                                                                                                                                                                                                                                                                                                                                                                                          AC007193 146180 bp DNA linear PRI 17-JUN Homo sapiens chromosome 19, BAC 82621 (CIT-B-139a18), complete
                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 146180)
                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                              AC007193.1
                                                                                                                                                                                                                                                                                                                                                                                                                                sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /rpt_family="Alusg"
complement(31707. .32005)
/rpt_family="Alusg"
complement(32050. .32614)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rpt_family="LTR8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rpt_family="MER4D"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'note="predicted exon, program:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rpt_family="Alusg"
                                                                                                                                                                                                                                                                                                                                                                                GI:4558635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.00%
100.00%
70.09%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1.64e-82
82.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        _family="MLT2D"
). .32601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         family-"(GA)n"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            family-"MER4D"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            family-"MER4D"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             : 2, quality: good, score: .29526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .30491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .29870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative:
          19q13.2 between APOE and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            107573
82
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    grail2exons_human_1.3,
50.000"
                                . and Carrano, A.V.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRI 17-JUN-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 81859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    81979
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    81919
                                                     0w, D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     misc_feature
repeat_region
                                               repeat_region
                                                                                          repeat_region
                                                                                                                                             repeat_region
                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                 misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                        repeat_region
                                                                                                                                                                                                                                                                                                                                             repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Direct Submission

Submitted (02-APR-1999) Joint Genome Institute, Lawrence Livermore Submitted (02-APR-1999) Joint Genome Institute, Lawrence Livermore National Laboratory, 7000 East Ave., Livermore, CA 94551, USA National Laboratory, 7000 East Ave., Livermore, CA 94551, USA Map and sequence oriented from q centromere to telomere. BAC 82621 (CIT-B-139a18) overlaps BAC 264576 (CIT-B-297n14) to the left from bases 1 to 27,487 of this accession, and separated from BAC 89981 (CIT-B-158d10) on the right by a gap of approximately 17 to 23 kb. Additional chromosome 19 map and sequence information may be obtained at: http://www-bio.lln1.gov/bbrp/genome/genome.html.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      D19S412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Lamerdin, J.E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (bases 1 to 146180)
                                                                 /rpt_family="AT_rich" complement(8598. .887A\/rpt_family="".
                                        /rpt_family="Alusx"
9477. .9766
  /rpt_family="AluSx"
9997. .10258
                                                                                                                                                                                                                                                                                                                                                                                                                                /note="predicted exon, program: grail2exons_human_1.3, frame: 2, quality: excellent, score: 81.000" complement(5169. .5468) /rpt_family="Aluy"
                                                                                                                                                               /rpt_family="Alusx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         complement(4269. .4568)
/rpt_family="Alux"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       complement(4005 . .4264)
/rpt_family="Alusx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   complement (2629.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /rpt_family="L1"
complement(1857.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rpt_family="AluJo"
355. .3655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Research Genetics.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rpt_famil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    rpt_family-"FLAM_A"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    rpt_family="L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  rpt_family-"L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           rpt_family="L1"
11. .677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      'note="LLNL clone name: BC82621
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           'cell_line="987SK"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      'map="19q13.2 between APOE and D19S412"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'chromosome="
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .146180
                                                                                                                                                                                                                                                               _family="(TA)n"
                                                                                                                                                                                                                                                                                                                 _family="Alu"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  _family-"LINE2"
                                                                                                                                                                                                                 _family="AluJb"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               _family="L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            _famil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  _family-"Alusx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  type="fibroblast"
                                                                                                                                                                                                                                                                                                                                                                                     predicted exon,
                                                                                                                                                                                                                                                                                                                                                               quality:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ly="AluSq"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ly="L1MB4"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .1974)
                                                                                                                                                                                                                                                                                                                                                            xon, program: grail2exons_human_1.3
good, score: 52.000"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BAC library obtained from
```

Š

Š

Ş

```
misc_feature
                                                                                                                                                    misc_feature
                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                     repeat_region
                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                  repeat_region
                                                                                                                                                                                                                                                                                                                                                 repeat_region
                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                overlaps BC282485 (CTC-344H19, AC007785) to the left from bases to 20,296 of this accession, and overlaps BC82621 (CTB-139A18, AC007193) to the right from bases 106,317 to 107,573 of this accession. This sequence does not represent the entire insert of BC264576. Additional chromosome 19 map and sequence information (BC264576).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BC264576. Additional chromosome 19 map and sequence information be obtained at: http://www-bio.llnl.gov/bbrp/genome/genome.html.
                                                                                                                                                                                                               /rpt_family="FLAM_C"
complement(7661..7916)
/rpt_family="L1"
7938..9726
                    /note="DDS similarity to AA456254 zx99d06.r1 Soares NhHMPuS1 Homo sapiens cDNA clone 811883 5'; (216...)
                                                                                                 complement(10866. 10964)
/note="predicted exon, program: grail2exons_human_1.3,
frame: 1, quality: excellent, score: 75.000"
11326. .11517
                                                                                                                                                                                                                                                                                                   complement(7150. .7485)
/rpt_family="L1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /rpt_family="AluJb" complement(3448. .38
                                                                                                                                                                                    complement(9736.
                                                                                                                                                                                                                                                                                                                              complement(7059. .7080)
/rpt_family="AT_rich"
                                                                                                                                                                                                                                                                                                                                                                                                                         complement(5338. .5369)
/rpt_family="(TA)n"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            complement (3805.
                                                                                                                                                                                                                                                                                                                                                                                 complement(5974.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              complement (4110.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      rpt_family="LlMA7"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /rpt_family="L1MB7"
complement / 2007
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /rpt_family="LIMA7"
complement/2730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         complement(829. .953)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         complement(669.
                                                                                                                                                                                                                                                                                                  rpt_family="
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /rpt_family="AluJo"
complement(4110)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /rpt_family="LIMB7"
complement(2011/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /rpt_family="(GA)n"
complement(800)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note="DDS similarity to AA456254 zx99d06.rl Soares NHHMPuS1 Homo sapiens cDNA clone 811883 5'; (3. .215); 100%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /cell_type="fibroblast"
/note="LLNL clone name: BC264576
from Research Genetics."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /map="19q13.2 between APOE
/clone="CTC-297N14"
/cell_line="978SK"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     rpt_tamily="(GGGA)n"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            dentity."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      organism="Homo sapiens"
db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        chromosome="19"
                                                                                                                                                              _family="Alusg"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         __family="L1MB7"
                                                                                    _family="AluJo"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         family="AluJo"
ement(2407
                                                                 .11998
                                                                                                                                                                                                                                                                                                                                                    *...6277)
*AluY"
                                                                                                                                                                                                                                                                                                                                                                                   "L1PA8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "L1MB7"
                                                                                                                                                                                                                                                                                                                                                                                                                                                    *LIM1 "
*LIM1 "
                                                                                                                                                                                 .10038)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      and D19S412"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BAC library obtained
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  information may
                                   , 269);
misc_feature
                              repeat_region
                                                                                              repeat_region
                                                                                                                            repeat_region
                                                                                                                                                           repeat_region
                                                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                        misc_feature
                                                              repeat_region
                                                                                                                                                                                            repeat_region
                                                                                                                                                                                                                                                                                           repeat_region
                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    repeat_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 repeat_region
```

/rpt\_family="AT\_rich"
complement(26677. .260/1./rpt\_family="AT\_rich"

'rpt\_family-"MIR"

/rpt\_family="HERVL" 25732. .25881

rpt\_family="MER45"

/rpt\_family="Alusx"
complement(27377;

\_family="AluSg"
3, .28177

/rpt\_family="AluSx" 28987. .29070

\_fami

Ly-"(TA)n'

/rpt\_famil 28646. .28

Y-"L1M1/2"

```
(12603. 12818) AA454642 zx99d06.s1 Soares NhHMPuS1 Homo sapiens cDNA clone 811883 3'; (216. .1); 99% identity.-(12600. .12823) A1081371 ox76g10.x1 Soares_NhHMPu_S1 Homo sapiens cDNA clone IMAGE:1662306 3'; (224. .1); 98% identity.-(12600. .12656) AA760247 vv74e06.r1 Stratagene mouse skin (#937313) Mus musculus cDNA clone 1228162 5'; (381. .432), 76% identity."

Complement(12967. .16062)
                                                                                                                                                                                                                                             complement(23090...23194)
/note="predicted exon, program: grail2exons_human_1.3,
frame: 2, quality: good, score: 50.000"
complement(24023...24141)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    complement(14029. .14445)
/note="predicted exon, program: grail2exons_human_1.3,
/note="predicted exon, program: grail2exons_human_1.3,
/note="predicted exon, program: grail2exons_human_1.3,
/note="predicted exon, program: grail2exons_human_1.3,
/note="predicted exon, predicted ex
complement(24910. .25309)
/rpt_family="MSTB"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /rpt_family="AluJo"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="DDS similarity to overlapping ESTs: (12144. .12398) AA456.24 zx99d06.rl Soares NhHMPUS1 Homo sapiens cDNA clone 811883 5'; (270. .523); 99% identity.-(12182. .12411) A1081371 ox76910.xl Soares_NhHMPU_S1 Homo sapiens cDNA clone IMAGE:1662306 3'; (454. .225); 100% identity.-(12173. .12411) AA454642 zx99d06.sl Soares NhHMPUS1 Homo sapiens cDNA clone 811883 3'; (455. .217); 100% identity.-(12144. .12411) AA760247 vv74e06.rl Stratagene mouse skin (#937313) Mus musculus CDNA clone 1228162 5'; (119. .380); 69% identity."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               complement(20427.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     complement(19767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  complement(18619.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="predicted exon, program: grail2exons_human_1.3,
frame: 2, quality: excellent, score: 90.000"
12600. 12818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                complement(12536. .12614)
                                                                                                                                                                                                rpt_family="FLAM_A"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'rpt_family="MER65A"
complement'20***
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     rpt_family="MER11A"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        rpt_family="MLT1B"
                                             t_family="AluJb"
)lement(240)^
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 τ_family="MER11A"
51. .1951α
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         _family="(CA)n"
6. .20751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                family-"AluSx"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            _family="AluJo"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .21397
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                            KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                  RESULT 2
AX164131
LOCUS
                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                   õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δĀ
                                             FEATURES
                                                                                                                                                                                                                                                                                                                                               뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-092-297-17 (1-117) x AX014140 (1-762)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                          ERSION
                                                                                                                                                                                                                                                        CCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                             ORGANISM
                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                                                                                                                                                                                                                                                                                                                                               303
                                                                                                                                                                                                                                                                                                                                                                           101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             123
                                                                                                                                                                                                                                                                                                                                                                                                                                      81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 ProLeuGlnProProArgAlaMetAlaProArgGlyCysIleValAlaValPheAlaIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                          AsnCysAspSerAlaArgThrSerAspAspArgLeuCysArgSerValSer 117
                                                                                                                                                                                                                                                                                                                                                                                                                  PheArgValCysPheGluGlnCysCysProTrpThrPheMetValLysLeuIleAsnGln 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LeuMetLeuCysGlnProH1sLysArgCysGlyAspLysPheTyrAspProLeuGlnH1s
                                                                                                                                                                                                                                                                                                                                                                                                 TTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCTGATAAACCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTGATGCTGTGCCAGCCACACAAGAGATGTGGGGGACAAGTTCTACGACCCCCTGCAGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCCATGACTCCTTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PheCysIleSerArgLeuLeuCysSerHisGlyAlaProValAlaProMetThrProTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCACTGCAACCACCCAGAGCCATGGCTCCCCGAGGCTGCATCGTAGCTGTCTTTGCCATT
                                                                                                                                                                                                                                                                                                                                         AACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGC
                                                                                                 Fong, S., Goddard, A., Godowski, P.J., Hillan, K.J., Tumas, D., Watanabe, C.K. Compositions and methods for the tre
                                                                                                                                           Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates; 1 (bases 1 to 771)
                                                            Genentech,
                                                                                     diseases
                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                       AX164131.1
                                                                                                                                                                                                                                                     Sequence 3 from AX164131
                                                                                                                                                                                                                                                                                    AX164131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human nucleic acid sequences of bladder tumour tissue Patent; WO 9954447-A 3 28-OCT-1999; SCHMITT ARMIN (DE); SPECHT THOMAS (DE); DAHL EDGAR (DE); HINZMANN BERND (DE); ROSENTHAL ANDRE (DE); METAGEN GES FUER GENOMFORSCHUN (DE); PILARSKY CHRISTIAN (DE) Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     l (bases 1 to /o²)
Schmitt,A., Specht,T., Dahl,E., Hinzmann,B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mammalia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JKaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; ammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                       WO 0140465-A 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ω
                                         Location/Qualifiers
/organism="Homo sapiens"
/db_xref≈"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Homo sapiens"
/db_xref="taxon:9606"
232 c 194 g 17
                                                                                                                                                                                                                                     GI:14545080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8.95e-125
117.00
100.00%
100.00%
100.00%
                                                         (US)
                                                                                                                                                                                                                                                                771 bp
Patent WO0140465
                                                                     07-JUN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                        Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      174 t
                                                                                                                                                                                                                                                                                 DNA
                                                                                                               Grimaldi,C.J., ., Wood,W.I. and
                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rosenthal, A.
                                                                                                                 and Zhang,
                                                                                                                                                                                                                                                                                                                                          353
                                                                                                                            Gurney, A.L.,
                                                                                                                                                                                                                                                                               PAT
                                                                                                                                                                                                                                                                               22-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                  302
                                                                                                                                                                                                                                                                                                                                                                                                                                                            242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         62
```

```
REFERENCE
AUTHORS
TITLE
                                                                                                                        REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
ORGANISM
                         COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AC006262
LOCUS
                                                                                                                                                                                                                                                                                                                                              REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment
Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-092-297-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BASE COUNT
                                                      JOURNAI
                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          101 AsnCysAspSerAlaArgThrSerAspAspArgLeuCysArgSerValSer 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTGATGCTGTGCCAGCCACACAAGAGATGTGGGGACAAGTTCTACGACCCCCTGCAGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LeuMetLeuCysGlnProHisLysArgCysGlyAspLysPheTyrAspProLeuGlnHis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCCATGACTCCTTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PheCysIleSerArgLeuLeuCysSerH1sGlyAlaProValAlaProMetThrProTyr
Direct Submission
Submitted (21-SEP-2001) Joint Genome Institute, Lawrence L
National Laboratory, 7000 East Ave., Livermore, CA 94551,
On Sep 21, 2001 this sequence version replaced gi:4079612.
Map and sequence oriented from centromere to g telomere. B
                                                                                          Direct Submission
Submitted (30-DEC-1998)
National Laboratory, 700
3 (bases 1 to 107573)
                                                                                                                                                                                               Lamerdin, J.E., McCready, P.M., Skowronski, E., Viswanathan, V., Burkhart-Schultz, K., Gordon, L., Dias, J., Ramirez, M., Stilwagen, S., Phan, H., Velasco, N., Do, L., Regala, W., Terry, A., Garnes, J., Danganan, L., Erler, A., Christensen, M., Georgescu, A., Avila, J., Liu, S., Attix, C., Andreise, T., Trankheim, M., Amico-Keller, G., Coefield, J., Duarte, S., Lucas, S., Bruce, R., Thomas, P., Quan, G., Kronmiller, B., Arellano, A., Sanders, C., Ow, D., Nolan, M., Trong, S. Kobayashi, A., Olsen, A.S. and Carrano, A.V. Sequence analysis of a 1.9 Mb region in 19q13.2 between APOE and D19S412
                                                                                                                                                                                Unpublished
                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Hominidae, 1 (bases 1 to 106320)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ното
                                                                                                                                                      Lamerdin, J.E.
                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                             sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AC006262
                                                                                                                                                                  (bases 1 to 107573)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (1-117) x AX164131 (1-771)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ω
                                                                                                                                                                                                                                                                                                                                                                                                                                  'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9.05e-125
117.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           chromosome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           a
                                                                                                          7000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        107573
ne 19, B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           195
                                                                                                         Joint Genome
)0 East Ave.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3 bp
BAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA
BC264576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           c
                              Institute, Lawrence Livermore Livermore, CA 94551, USA
                                                                                                         Institute,
Livermore,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTC-297N14), complete
                                                                                                                                                                                                                                                                                                                                                       Hominidae;
                                                                                                      Lawrence Livermore CA 94551, USA
                                                                                                                                                                                                                                                                                                                                                                   Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRI 21-SEP-2001
      BC264576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      80.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     62
```

```
Command line parameters:

MODEL-frame-p2n.model -DEV=xlh
-Q-/Ggp2_1/USPTO_Spool/US9092297/runat_29102002_094019_22469/app_query.fasta_1.263
-DB-GenEmb1 -QFMT-fastap -SUFFIX-011p2n.rge -MINNATCH-0.1 -LOOPCL=0 -LOOPEXT-0
-UNITS-bits -STARR-1 -END=-1 -MARRIX-011go -TRANS-human40.cdi -LIST-45
-DCCALIGN-200 -TRE_SCORE-quality -THR_MIN-1 -ALIGN-15 -MODE-LOCAL -OUTFMT-pto
-NORM-ext -HEAPSIZE-500 -MINLEN=0 -MAXIEN=200000000
-USER-US09092297_8CGN_1_1_1182_8runat_29102002_094019_22469 -NCPU-6 -ICPU-3
-NO_XLPXY -NO_MMAP -LARGDUERY -NCB_SCORES-0 -WAIT -LONGLOG -DEV_TIMEOUT=120
-WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=60 -XGAPEXT=60 -FGAPOXT=7
-YGAPOP=60 -YGAPEXT=60 -DELEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Post-processing: Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Word size:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 nucleic search, using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OLIGO
Xgapop 60.0 , ;
Ygapop 60.0 , ;
Fgapop 6.0 , ;
Delop 6.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-092-297-17
117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            November 3, 2002, 04:37:05; Search time 1825 Seconds (without alignments) 1341.592 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GenEmbl:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1797656 seqs, 10463268293 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PLQPPRAMAPRGCIVAVFAI.....INQNCDSARTSDDRLCRSVS 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GenCore version 5.1.3 Copyright (c) 1993 - 2002 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gb_ba:*
gb_htg:*
gb_in:*
                                                                                                                                                                                                                                                                                                                                                                                                                              gb_pat:*
gb_ph:*
                                                                                                                                                                                em_in:*
                                        em_pl:*
                                                                            em_pat:*
em_ph:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gb_om:*
                                                                                                                      em_or:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    *: vo_d
em_un:*
                                                                                                                                                                                                                                                em_fun:
                                                                                                                                                                 em_om: *
                                                                                                                                                                                                                          em_hum:*
                                                                                                                                                                                                                                                                   em_ba:*
                                                                                                                                                                                                                                                                                                                            gb_sy:*
                                                                                                                                                                                                                                                                                                                                               gb_sts:*
                                                                                                                                                                                                                                                                                                                                                                  *:or_d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Xgapext 60.0
Ygapext 60.0
Fgapext 7.0
Delext 7.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               frame_plus_p2n model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3592932
```

```
29: em_vi:*
30: em_htg_hum:*
31: em_htg_inv:*
32: em_htg_other:*
33: em_htgo_inv:*
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	0 0 3 3 3 3 5 5 4 3 2 F		00,00 02222 05422	2222222		000 004 004	Result
<b>.</b> 	<b>ထ ထ ထ ထ ထ</b>	, co co co co	သာထာထာထာထ			117 117 82 9 9	õ
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	<b>.</b>					100.0 100.0 70.1 7.7 7.7 7.7	م تر ه
133137 139330 140867 151184 154894 155213 155723 158895 162126 162281	2326 2750 2874 2874 3135	9697 9697 0380 0581	744 729 7429 7429	8 5 2 4 4 1 7 5 6 6 8 5 2 4 4 1 7 5 6 6 8 5 4 4 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	8056 28956 2897 287 287 287 287 287	4667706	Length
νυωνοουφοο	ω φ z φ z	U 0 0 0 0 V	) W W W W W	® 2 ® 2 P 2 P 1	09816122		DB
00000000000000000000000000000000000000	10964 00296 JN000 50811	572 547 253 211	11050	00252 00252 01410 00945 01440 01028 02017	03417 00569 30982 320982 34167 34167	01414 01413 16413 00626 00719 00719 AC002	ID
AC007245 Homo sapi AL050325 Human DNA AP003316 Oryza sat AC098502 Rattus so AL035510 Homo sapi AL118523 Human DNA AL606626 Oryza sat AC009345 Drosophil AC011784 Homo sapi AC011784 Homo sapi	109641 Homo sap 002964 Homo sap 606706 Oryza sa 021707 Human DN	5725 Rattus 5725 Rattus 3472 Homo sa 2536 Oryza s 0119 Takifug	110506 Mus mus 005135 Drosopt 139283 Human E 162495 Human E	0 Neisseri 0 Neisseri 1 Drosophi 1 Drosophi 2 Drosophi 3 Sorghum 3 Sorghum 6 Drosophi	034170 Hom 083885 Hom 00569 frui 309824 Sec 320338 Unc 320338 Unc 5943 Huamr	4140 Sequence 4131 Sequence 6262 Homo sap 7193 Homo sap 2069 Human BA	Description

RESULT 1
AX014140
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM

AX014140 Sequence 3 : AX014140 AX014140.1

762 bp from Patent W09954447.

DNA

linear

PAT 07-SEP-2000

ALIGNMENTS

GI:10040587

Homo sapiens

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                         Command line parameters:

-MODEL-frame+_p2n.model -DEV-xlh
-O-/cgn2_1/USPT0_spool/US09092297/runat_29102002_094020_22498/app_query.fasta_1.263
-DB-EST -OFMY=fastap -SUFFIX-olip2n.rst -MINMATCH=0.1 -LOOPCL=0 -LOOPEXT=0
-UNITS-bits -START=1 -END=-1 -MATRIX-oligo -TRANS-human40.cdi -LIST-45
-DOCALIGN=200 -THR_SCORE-quality -THR_MIN=1 -ALIGN=15 -MODE=LOCAL -OUTFMT=pto
-NORM-ext -HEAPSIZE=500 -MINLEN=0 -MAXEN=200000000
-USER=US09092297_@CGN_1_1_763_@runat_29102002_094020_22498 -NCPU=6 -ICPU=3
-NO_MMAP -LARGEQUERY -NEG_SCORES-0 -WAIT -LONGLOG -DEV_TIMEOUT=120
-WARN_TIMEOUT=30 -THREADS-1 -XGAPOP=60 -XGAPEXT=60 -FGAPOP=6 -FGAPEXT=7
                                                                                                                                                                                                                                                                                                                                                                          Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Post-processing: Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Word size:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OM protein - nucleic search,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Run on:
                                                                                                                                                                                                                                                                                                                                                                                                    YGAPOP-60 -YGAPEXT-60
                                                                                                     Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
      84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Xgapop 60.0 , 2
Ygapop 60.0 , 1
Fgapop 6.0 , 1
Delop 6.0 ,
                                          Match
                                                        Query
     71.8
70.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OLIGO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13736207 seqs, 6748477542 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       us-09-092-297-17
117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 PLQPPRAMAPRGCIVAVFAI.....
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      November 3,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GenCore version 5.1.3 Copyright (c) 1993 - 2002 Compugen Ltd.
                                                                                                                                                                                                                                                                                          em_estmu:*
em_estov:*
em_estpl:*
                                                                                                                                                                                                                                                    gb_est1:*
                                                                                                                                                           em_gss_hum: *
em_gss_inv: *
em_gss_pln: *
em_gss_vrt: *
                                                                                                                                                                                                                                                                                                                                                em_estba:*
em_esthum:*
                                                                                                                                                                                                                                                                  em_htc:*
                                                                                                                                                                                                                                                                                 em_estro:*
                                                                                                                                                                                                                                                                                                                                     em_estin:*
                                                                                                                                                                                                                 gb_gss:*
                                                                                                                                                                                                                            gb_htc:*
                                                                                                                                                                                                                                         gb_est2:*
                                           Length DB
                                                                                                                                                                                                                                                                                                                                                                                                     -DELOP-6
     729
412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2002, 05:05:20 ; Search time 1686 Seconds (without alignments) 936.621 Milion cell updates/sec
    10 BG775059
9 AA456370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Xgapext 60.0
Ygapext 60.0
Fgapext 7.0
Delext 7.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             using
                                                                                                                                                                                                                                                                                                                                                                                                  -DELEXT-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          frame_plus_p2n model
                                                                                SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INQUCDSARTSDDRLCRSVS 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            27472246
                               Description
BG775059 602650023
AA456370 aa14e02.r
                                                                                                                                                         REFERENCE
AUTHORS
                                                                                                                                                                                                          SOURCE
ORGANISM
                                                                                                                                                                                                                                    VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                RESULT 1
BG775059
                                                                                                                  COMMENT
                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                       Locus
                                                                                                                                                                                                                                                                                                                                                                                                            0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       იი
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                იი
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     იი
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          O
                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                      4440

4440

4440

4440

4440

4440

4440

4440

4440

4440

4440

4440

4440

4440

4440
```

•	. •	_			_	_			٠,		_		.~	_	_	v	w	. ~	O1	J1	_	w	~	_		v	ω	7	<b>υ</b> 1	U1 #	• u			0	9	30	7	ທ	υī	4	ω	
α	000	ο α	- α	00	œ	00	80	œ	œ	· œ	œ	8	œ	œ	œ	80	œ	ω	œ	œ	œ	œ	œ	æ	80	œ	œ	œ	ω (	<b>20</b> C		œ	· w	ø	10	16	16	24	56	58	70	
•	n (0)	•	•		•	•	•	•																												w	w	0	7		٥	
	906																																									
~	2 2	$\sim$	0		$\sim$	O		N		0	N	0	N		N	N	N	0	$\sim$	N	0	0	0	N	0		N,	0	•	> <b>^</b>	N	•		0	0				-	0	>	
CNS04CF0	CNS02YMC	CNS054SO	BE972075	BE035030	CNS01YWB	BE974238	BE034300	BH269235	BE130713	BG535756	CNS01SUL	BG605861	CNS01UE4	BB631694	CNS02XNY	AQ581989	AZ566931	вJ073196	вн357128	BH268789	BM301258	BG680336	BG966629	AZ114409	вм000341	BE131299	A0034057	BE468930	AW424984	BF012018	вн290179	AW610810	BE035031	F20995	BE664072	AA195677	AW795497	AI572169	AW991605	BF911379	BG775668	
	AL219837 Te																																				M.R	Ψ.	2 1	70	ה ה	
traodon	7 Tetraodon	traodon	1651532	1H03 M	traodon	1680206	2H09 M	230-56D	-919T3	2563878	traodon	IZ2 82	traodon	31694	traodon	CI-11-4	8PvC05	073196	1230-106	1230-21A	R039D09	2629230	2834475	CT-23-9	3108700	1-12647	3103576	20015	SA MAD	CI-24-1	1230-158	37g05.x	)1H04 M	05444 н	8225 MA	12h04.s	OWD.	7e06.	PNOC	2-1170023	20.00	

## ALIGNMENTS

BG775059

BG775059

RNA Sequence.

BG775059.1 GI:14045376

EST.

BG775059.1 GI:14045376

EST.

human.

Homo sapiens

EUkaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 729)

NIH-MGC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)

Contact: Robert Strausberg, Ph.D.

Email: cgapbs-remail.nih.gov

Tissue Procurement: DCTD/DTP

CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:

http://image.llnl.gov

Plate: LLCM1612 row: n column: 06

```
RESULT 2
AA456370
                                                                   COMMENT
                                                                                                                                                                                                                                                                                 SOURCE
                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-092-297-17 (1-117) x BG775059 (1-729)
                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                               KEYWORDS
                                                                                                                                                                                                                                                                                                                       VERSION
                                                                                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                   TITLE
JOURNAL
                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                  AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Мо
. :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    41 LeuMetLeuCysGlnProHisLysArgCysGlyAspLysPheTyrAspProLeuGlnHis 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4
                                                                                                                                                                                                                                                                                                                                                                                                                                                              CysCysTyrAspAspAlaValValProLeuAlaArgThr-GlnThrCysGlyAsnCysTh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCTGATAAACCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCCAGACGTGTGGAAACTGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PheCysIleSerArgLeuLeuCysSerHisGlyAlaProValAlaProMetThrProTyr 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCATGACTCCTTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rPheArgValCysPheGluGlnCysCysProTrpThrPheMetValLysLeuIleAsnGl 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTGATGCTGTGCCAGCCACACAGAGATGTGGGGACAAGTTCTACGACCCCCTGCAGCAC
     Washington University School of Medicine 4444 Forest Park Parkway, Box 8501, St. Louis, Tel: 314 286 1800
                                                             Hillier,L., Allen,M., Bowles,L., Dubuque,T., Geisel,G., Jost,S., Kucaba,T., Lacy,M., Le,N., Lennon,G., Marra,M., Martin,J., Moore,B., Schellenberg,K., Steptoe,M., Tan,F., Theising,B., White,Y., Wylie,T., Waterston,R. and Wilson,R.
WashU-Merck EST Project 1997
Unpublished (1997)
Contact: Wilson RK
                                                                                                                                                                                                                                                                                                                                                                     AA456370 412 bp
aa14e02.rl Soares_NhHMPu_S1 Homo
                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo
                                                                                                                                                                                                                                                                                                                                     5', mRNA sequence.
AA456370
                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                   AA456370.1 GI:2178946
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               High
                                                                                                                                                                                                                                                                                 man
                                                                                                                                                                                                  (bases 1 to 412)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           quality sequence stop: 726.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /lab_host="PH10B (phage-resistant)"
/note="Organ: prostate; Vector: pOTB7; Site_1: XhoI;
Site_2: EcoRI; cDNA made by oligo-dT priming.
Directionally cloned into EcoRI/XhoI sites using the following 5 adaptor: GGCAGGAG(G). Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies).
Note: this is a NIH_MGC Library."

1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /clone="IMAGE:4761029"
/clone_lib="NIH_MGC_40"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tissue_type="carcinoma, cell line"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2.24e-75
84.00
98.98%
98.98%
71.79%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative:
                                                                                                                                                                                                                                                                                                                                                                       sapiens
                                                                                                                                                                                                                                                                                                                                                                                           mRNA
                                                                                                                                                                                                                                                                                                                                                                       cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         729
97
0
1
                                                                                                                                                                                                                                                                                                                                                                                     linear
                         MO 63108
                                                                                                                                                                                                                                                                                                                                                                       EST 06-JUN-1997
IMAGE:813242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          63
                                                         SOURCE
ORGANISM
                                                                                             VERSION
KEYWORDS
                                                                                                                                                                                                          RESULT 3
BG775668/c
   REFERENCE
                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                   õ
                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                            δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-092-297-17 (1-117) x AA456370 (1-412)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                         275 GTCAGC
                                                                                                                                                                                                                                                                                                           116 ValSer 117
                                                                                                                                                                                                                                                                                                                                                                                                                  155 TGTGGAAACTGCACCTTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                              76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             36 ProMetThrProTyrLeuMetLeuCysGlnProHisLysArgCysGlyAspLysPheTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                      CysGlyAsnCysThrPheArgValCysPheGluGlnCysCysProTrpThrPheMetVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GACCCCCTGCAGCACTGTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCAGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AspProLeuGlnHisCysCysTyrAspAspAlaValValProLeuAlaArgThrGlnThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCCATGACTCCTTACCTGATGCTGTGCCAGCCACACAAGAGTGTGGGGACAAGTTCTAC
                                                                                             mRNA sequence.
BG775668
BG775668.1 GI:
EST.
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 828)
                                                                                                                                                            BG775668 828 bp r
602650023T1 NIH_MGC_40 Homo sapiens
                                                         Homo sapiens
                                                                             numan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Email: estewatson.wustl.edu
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
Seq primer: -28ml3 rev2 ET from Amersham
High quality sequence stop: 398.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Fax: 314 286 1810
                                                                                                                                                                                                                                                                     280
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note-"Organ: mixed (see below); Vector: pT7T3D-Pac (Pharmacia) with a modified polylinker; Site_1: Not I; Site_1: Eco RI; Equal amounts of plasmid DNA from three normalized libraries (melanocyte 2NbHM, pregnant uterus NbHPU, and fetal heart NbHH19W) were mixed, and ss circles were made in vitro. Following HAP purification, this DNA was used as tracer in a subtractive hybridization reaction. The driver was PCR-amplified cDNAs from pools of 5,000 clones made from the same 3 libraries. The pools consisted of I.M.A.G.E. clones 260232-265223, 340488-345479, and 484488-489479."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             pregnant uterus"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /db_xref="GDB:6044152"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone_lib="Soares_NhHMPu_S1"
/tissue_type="Pooled human me
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /clone="IMAGE:813242"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1.28e-73
82.00
                                                                                                                 GI:14045985
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels:
                                                                                                                                                                                          mRNA
                                                                                                                                                                    cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 melanocyte, fetal heart,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
0
0
0
0
0
```

밁 Ş 밁 δÃ 밁 Ş 닭 δÃ 밁 Š

linear

ear EST 15-MAY-2001 IMAGE:4761029 3',

75 94

214 95 154

```
RESULT 4
BF911379
                                                             LOCUS
DEFINITION
                                                                                                                          밁
                                                                                                                                               νg
                                                                                                                                                                          밁
                                                                                                                                                                                             Ş
                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                Q
                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                ş
                                                                                                                                                                                                                                                                                                                                                                         US-09-092-297-17 (1-117) x BG775668 (1-828)
                                                                                                                                                                                                                                                                                                                                                                                                      Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL COMMENT
              SOURCE
                                    VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
                          KEYWORDS
                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                          417
                                                                                                                                                  101
                                                                                                                                                                           476
                                                                                                                                                                                                                             536
                                                                                                                                                                                                                                                                           596
                                                                                                                                                                                                                                                                                                                     81
                                                                                                                                                                                                                                            61 CysCysTyrAspAspAlaValValProLeuAlaArgThrGlnThrCysGlyAsnCysThr 80
                                                                                                                                                                                                                                                                                   41 LeuMetLeuCysGlnProHisLysArgCysGlyAspLysPheTyrAspProLeuGlnHis
                                                                                                                                                                                                                                                                     CTGATGCTGTGCCAGCCACACAAGAGGTGTGGGGACAAGTTCTACGACCCCCTGCAGCAC 537
                                                                                                                                   ASnCysAspSerAlaArgThrSerAspAspArgLeuCysArgSerValSer 117
                                                                                                                                                                   TTCAGAGTCTGCTTTGAGCAGTGCTG-CCCTGGACCTTCATGGTGAAGCTGATAAACCAG
                                                                                                                                                                                                                     TGTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCAGACGTGTGGAAACTGCACC
                                                                                                                     PheArgValCysPheGluGlnCysCysProTrpThrPheMetValLysLeuIleAsnGln 100
                          EST
                                                IL2-UT0073-081100-213-D02
BF911379
Homo sapiens
                                   BF911379.1
                                                                        BF911379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Plate: LLCM1612 row: n column: 06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: cgapbs-r@mail.nih.gov
Tissue Procurement: DCTD/DTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unpublished (1999)
Contact: Robert St
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cDNA Library Preparation: Ling Hong/Rubin Laboratory cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              quality sequence start: 16 quality sequence stop: 806. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="IMAGE:4761029"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     clone_lib="NIH_MGC_40"
                                                                                                                                                                                                                                                                                                                                                                                                            4.52e-61
70.00
98.97%
98.97%
98.97%
59.83%
                                    GI:12302837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Strausberg, Ph.D.
                                                          201 bp
2 UT0073
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                  Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                               Indels:
                                                         Homo sapiens cDNA,
                                                                      mRNA
                                                                                                                                                                                                                                                                                                                                                                                                  96
96
1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gene
                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Collection (MGC)
                                                                                                                      367
                                                    EST 18-JAN-2001 mRNA sequence.
                                                                                                                                                                     418
                                                                                                                                                                                                                     477
                                                                                                                                                                                                                                                                                              60
                                                                                                                                                                                                                                                                                                                      597
                                                                                                                                                                                                                                                                                                                                              40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         эd
```

```
ACCESSION
VERSION
KEYWORDS
                                                                       RESULT 5
AW991605
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
MEDLINE
COMMENT
                                                                                                                                              В
                                                                                                                                                                              δõ
                                                                                                                                                                                                                    B,
                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity:
Query Match:
                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                          US-09-092-297-17 (1-117) x BF911379 (1-201)
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFÉRENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                              148
                                                                                                                                                                                                                                                                                95
                                                                                                                                                                                                                    88
                                                                                                                                                                                                                               75 ThrCysGlyAsnCysThrPheArgValCysPheGluGlnCysCysProTrpThrPheMet 94
                                                                                                                                                        ValLysLeuIleAsnGlnAsnCysAspSerAlaArgThrSerAspAspArgLeu 112
                                                                                                                                         GTGAAGCTGATAAACCAGAACTGCGACTCAGCCCGGACCTCAGATGACAGGCTT
                                                                                                                                                                                                             ACGTGTGGAAACTGCACCTTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATG
AW991605
RC1-BN0005-030500-015-g07
AW991605
AW991605.1 GI:8251660
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              l (bases 1 to 201)

Dias Neto,E., Garcia Correa,R., Verjovski-Almeida,S., Briones,M.R.,
Nagai,M.A., da Silva,W. Jr., Zago,M.A., Bordin,S., Costa,F.F.,
Goldman,G.H., Carvalho,A.F., Matsukuma,A., Bala,G.S., Simpson,D.H.,
Brunstein,A., deOliveira,P.S., Bucher,P., Jongeneel,C.V., O'Hare,M.J., Soares,F., Brentani,R.R., Reis,L.F., de Souza,S.J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Email: asimpson@ludwig.org.br
This sequence was derived from the FAPESD/LICR Human Cancer Genome
Project. This entry can be seen in the following URL
(http://www.ludwig.org.br/scripts/gethtml2.pl?tl=ILZ&t2=IL2-UT0073-
081100-213-D02&t3=2000-11-08&t4=1)
Seq primer: puc 18 forward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 andar,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Simpson A.J.G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sequence tags
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Shotgun sequencing of the human transcriptome with ORF expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Simpson, A.J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fax: +55-11-2707001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 quality sequence start: 13 quality sequence stop: 201. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      +55-11-2704922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Natl.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note-"Organ: uterus_tumor; Vector: puc18; Site_1: SmaI; Site_2: SmaI, A mini-library was made by cloning products derived from ORESTES PCR (U.S. Letters Patent application No. 196,716 - Ludwig Institute for Cancer Research) profiles into the pUC 18 vector. Reverse transcription of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tissue mRNA and cDNA amplification were performed low stringency conditions." 63 c 51 g 48 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /dev_stage="Adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone_lib-"UT0073"
                                                                                                                                                                                                                                                                                                                                                                                                            1.48e-49
58.00
100.00%
100.00%
49.57%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Acad.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sci. U.S.A.
                                                  533 bp
7 BN0005
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                          Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                  Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                97
                                                Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (7),
                                                               mRNA
                                                sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3491-3496 (2000)
                                                                                                                                                                                                                                                                                                                                                                                            0 0 0 5 8 0 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01509-010,
                                               linear
ens cDNA,
                                               mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sao
                                                                                                                                       201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Paulo-SP,
                                                                                                                                                                                                             147
```

```
RESULT 6
AI572169
                                                                                                                                                                                                                                         δõ
                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                          US-09-092-297-17 (1-117) x AW991605 (1-533)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE
COMMENT
                                                                                                                                   밁
                                                                                                                                                                 Ş
                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity:
Query Match:
                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                   102
                                                                                                                                                                                                                                           82
                                                                                                                                                                                                                                                                            60
                                                                                                                                                                                                                                                                                                              62
                                                                                                                                                                                                                                                                     TGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGC 227
                                                                                                                                              CysAspSerAlaArgThrSerAspAspArgLeuCysArgSerValSer 117
                                                                                                                                                                                                 AGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCTGATAAACCAGAAC
                                                                                                                                                                                                                    ArgValCysPheGluGlnCysCysProTrpThrPheMetValLysLeuIleAsnGlnAsn 101
                    AI572169 275 bp mRNA linear EST 13-APR-19-te37e06.x1 Soares_NhHMPu_S1 Homo sapiens cDNA clone IMAGE:20888983', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: asimpson@ludwig.org.br
This sequence was derived from the FAPESP/LICR Human Cancer Genome
Project. This entry can be seen in the following URL
(http://www.ludwig.org.br/scripts/gethtml2.pl?tl=&t2=RC1-BN0005-030
500-015-g75413=2000-05-031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Dias Neto,E., García Correa,R., Verjovski-Almeida,S., Briones,M.R., Nagai,M.A., da Silva,W. Jr., Zago,M.A., Bordin,S., Costa,F.F., Goldman,G.H., Carvalho,A.F., Matsukuma,A., Baia,G.S., Simpson,D.H., Brunstein,A., deOliveira,P.S., Bucher,P., Jongeneel,C.V., O'Hare,M.J., Soares,F., Brentani,R.R., Reis,L.F., de Souza,S.J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Run Prof. Antonio Prudente 109, 4 andar, 01509-010,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Shotgun sequencing of the human transcriptome with ORF expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sequence tags
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 (bases 1 to 533)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        primer: puc 18 forward h quality sequence start: 16 h quality sequence stop: 533.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              tact: Simpson A.J.G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       +55-11-2704922
+55-11-2707001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Natl. Acad. Sci. U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note="Organ: breast_normal; Vector: puc18; Site_1: Sma1; Site_2: Sma1; A mini-library was made by cloning products derived from ORESTES PCR (U.S. Letters Patent application No. 196,716 - Ludwig Institute for Cancer Research) profiles into the pUC 18 vector. Reverse transcription of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tissue mRNA and cDNA amplification were performed under low stringency conditions." 156 c 150 g 111 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /db_xref="taxon:9606"
/clone_lib="BN0005"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /dev_stage="Adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   'organism≖"Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                     4.8e-47
56.00
100.00%
100.00%
47.86%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chordata; Craniata; Vertebrata; Euteleostomi; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                     Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              97 (7), 3491-3496 (2000)
                                                    EST 13-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Paulo-SP
                                                                                                                                                                                                              RESULT 7
AW795497
                                                                                                                        VERSION
KEYWORDS
                                                                                                                                                                            LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
TITLE
                                 REFERENCE
                                                                                                                                                                                                                                                                       맑
                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                              US-09-092-297-17 (1-117) x AI572169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
               AUTHORS
                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                        61 CysCysTyrAsp 64
                                                                                                                                                                                                                                                                     TGTTGCTATGAT
Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
1 (bases 1 to 130)
Dias Neto,E., Garcia Correa,R., Verjovski-Almeida,S.
                                                                                                                          EST
                                                                                                                                           AW795497.1
                                                                                                                                                            MR4-UM0019-100400-203-e10
AW795497
                                                                                                                                                                                               AW795497
                                                                                                       human.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AI572169
AI572169.1 GI:4535543
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tumor Gene Index
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     58
                                                                                                                                                                                                                                                                     251
                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.00%
100.00%
20.51%
9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8.16e-15
24.00
```

```
180 CTGATGCTGTGCCAGCCACACAGAGATGTGGGGACAAGTTCTACGACCCCCTGCAGCAC 239
                                                                                                                                                                                                                                                                              41 LeuMetLeuCysGlnProHisLysArgCysGlyAspLysPheTyrAspProLeuGlnHis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
Insert Length: 585 Std Error: 0.00
Seg primer: -40UP from Gibco
Seg primer: -40UP from Gibco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             High quality sequence stop: 272.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 275)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="Organ: mixed (see below); Vector: pT7T3D-Pac (Pharmácia) with a modified polylinker, Site_1: Not I; Site_2: Eco RI; Equal amounts of plasmid DNA from three normalized libraries (melanocyte 2NbHM, pregnant uterus NbHPU, and fetal heart NbHH19W) were mixed, and ss circles were made in vitro. Following HAP purification, this DNA was used as tracer in a subtractive hybridization reaction. The driver was PCR-amplified cDNAs from pools of 5,000 clones made from the same 3 libraries. The pools consisted of I.M.A.G.E. Clones 260232-265223, 340488-345479, and 484488-489479.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         pregnant uterus"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="IMAGE:2088898"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone_lib="Soares_NhHMPu_S1"
/tissue_type="Pooled human melanocyte,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             on/Qualifiers
                                                                                                                                                                                                                                                                                                                                                           (1-275)
130 bp
                               130
                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                               Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                     27<sub>5</sub>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               fetal
mRNA
                         EST 16-MAY-2000
```

Verjovski-Almeida,S.,

Euteleostomi;

```
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                 RESULT 8
AA195677/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-092-297-17 (1-117) x AW795497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match:
DB:
                                                                                                                                REFERENCE
                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                      VERSION
                                                                                                                                                                                                                                                                       ACCESSION
                                                                                                                                                                                                                                                                                                                DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     No ::
                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                              33 ProValAlaProMetThrProTyrLeuMetLeuCysGlnProHisLys
                                                                                                                                                                                                                                                                                                                                                                                                       Hillier, L., Lennon, G., Becker, M., Bonaldo, M.F., Chiapelli, B., Chiasoe, S., Dietrich, N., DuBuque, T., Favello, A., Gish, W., Hawkins, M., Hultman, M., Kucaba, T., Lacy, M., Le, M., Le, N., Mardis, E., Moore, B., Morris, M., Parsons, J., Prange, C., Rifkin, L., Rohlfing, T., Schellenberg, K., Soares, M.B., Tan, F., Thierry, Meg, J., Trevaskis, E., Underwood, K., Wohldmann, P., Waterston, R., Wilson, R. and Marra, M.
                                                                                                                                                                                                                                                                                 3', mRNA sequence
                                                                                                                                                                                                                                                                                                          AA195677 475
zr32h04.sl Soares_NhHMPu_Sl F
                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Hominidae
                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                AA195677.1 GI:1785355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Email: asimpson@ludwig.org.br
This sequence was derived from the FAPESP/LICR Human Cancer Genome
Project This entry can be seen in the following URL
(http://www.ludwig.org.br/scripts/gethtml2.pl?tl-&t2-MR4-UM0019-100
400-203-e10&t3=2000-04-10&t4-1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Contact: Simpson A.J.G.
Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 andar,
                                                                                                                                                                                                                                                                       AA195677
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nagai,M.A., da Silva,W. Jr., Zago,M.A., Bordin,S., Costa,F.F., Goldman,G.H., Carvalho,A.F., Matsukuma,A., Baia,G.S., Simpson,D.H., Brunstein,A., deOliveira,P.S., Bucher,P., Jongeneel,C.V., O'Hare,M.J., Soares,F., Brentani,R.R., Reis,L.F., de Souza,S.J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sequence tags
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Shotgun sequencing of the human transcriptome with ORF expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Simpson, A.J.
                                                                                                                            (bases 1 to 475)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    primer: puc 18 forward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        quality sequence start: 19 quality sequence stop: 129 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            +55-11-270700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 +55-11-2704922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Natl. Acad. Sci. U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /dev_stage="Adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /clone_lib="UM0019"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4.82e-07
16.00
100.00%
100.00%
13.68%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (1-130)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                            Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   97
                                                                                                                                                                                                                                                                                                        mRNA linear
sapiens cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (7),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3491-3496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01509-010,
                                                                                                                                            Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (2000)
                                                                                                                                                                 Euteleostomi;
                                                                                                                                                                                                                                                                                                        EST 19-MAY-1997
IMAGE:665143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sao
```

В QΥ

```
ACCESSION
                                                                                                                                                                         REFERENCE
                                                                                                                                                                                                                                                                                                                                                                     Locus
                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                             VERSION
                                                                                                                                                                                                                                                                                                                                                                                                              RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-092-297-17 (1-117) x AA195677
                                                                                                                                                                                                                                                                        SOURCE
                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                            BE664072
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMMENT
JOURNAL
MEDLINE
                                                          TITLE
                                                                                                                                                         AUTHORS
                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDITNE
                                                                                                                                                                                                                                                                                                                                                                                                                                                    460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  102 CysAspSerAlaArgThrSerAspAspArgLeuCysArgSerValSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                TGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGC
                                                                                                                                                                                                                                                                                                                               BE664072
148225 MARC
BE664072
                                                                                      l (bases 1 to 554)
Smith, T.P.L., Grosse, W.M., Freking, B.A., Roberts, A.J., Stone, R.T.,
Casas, E., Wray, J.E., White, J., Cho, J., Fahrenkrug, S.C., Bennett
,G.L., Heaton, M.P., Laegreid, W.W., Rohrer, G.A., Chitko-McKown, C.G.
Pertea, G., Holt, I., Karamycheva, S., Liang, F., Quackenbush, J. and
                                Sequence evaluation of four pooled-tissue normalized libraries and construction of a gene index for cattle
                                                                                                                                                                                                                                                                                           BE664072.1
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Genome Re
97044478
Genome Res.
21180013
                                                                                                                                                                                                                                                    Bos taurus
                                                                                                                                                                                                                                                                        COM
                                                                            Keele, J.W.
                                                                                                                                                                                            Bovidae; Bovinae;
                                                                                                                                                                                                            Mammalia;
                                                                                                                                                                                                                                Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Insert Length: 857 Std Error:
High quality sequence stop: 308
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4444 Forest Park Parkway,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Generation a Genome Res.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact: Wilson RK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            IMAGE Consortium (info@image.llnl.gov)
Insert Length: 857 Std Error: 0.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This clone is available royalty-free through LLNL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Washington University
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          est@watson.wustl.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         were made in vitro. Following HAP purification, this by was used as tracer in a subtractive hybridization reaction. The driver was PCR-amplified CDNAs from pools 5,000 clones made from the same 3 libraries. The pools consisted of I.M.A.G.B. Clones 260232-265223, 340488-345479, and 484488-489479."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note-"Organ: mixed (see below); Vector: pT7T3D-Pac (Pharmacia) with a modified polylinker; Site_1: Not I; Site_2: Eco RI; Equal amounts of plasmid DNA from three normalized libraries (melanocyte 2NbHM, pregnant uterus NbHPU, and fetal heart NbHH19W) were mixed, and so circle NbHPU, and fetal heart NbHH19W) were mixed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Homo sapiens"
/db_xref="GDB:5427175"
/db_xref="taxon:9606"
/clone="IMAGE:665143"
/clone=11b="Soares_NhHMPu_S1"
                                                                                                                                                                                                            ; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /tissue_type="Pooled human melanocyte, fetal heart,
pregnant uterus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /lab_host="DH10B"
                  11 (4),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      16.00
100,00%
100,00%
13:68%
                                                                                                                                                                                                                                                                                                                                                   4BOV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2.08e-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 analysis of 280,000 human expressed sequence tags (9), 807-828 (1996)
                                                                                                                                                                                                                                                                                                                                                 Bos taurus cDNA
                                                                                                                                                                                         Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               School of Medicine way, Box 8501, St. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (1-475)
                                                                                                                                                                                                                                                                                                                                                                       554 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                 5', mRNA sequence
                                                                                                                                                                                                                                                                                                                                                                     mRNA
                                  index for cattle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Louis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 475
0
0
0
                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ŏ
                                                                                                                                                                                                                                                                                                                                                                   EST
                                                    bovine cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      from pools of
                                                                                                                                                                                                                                                                                                                                                                   25-APR-2001
                                                                                                             .
G
```

```
LOCUS
DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 10
F20995/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity:
Query Match:
DB:
                                                                                         FEATURES
                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-092-297-17 (1-117) x BE664072 (1-554)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                  MEDLINE
                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                       source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    76 CysGlyAsnCysThrPheArgValCysPhe 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGTGGGAACTGCACCTTTAGGGTCTGCTTC 251
                                                                                                                                     CRIBI Biotechnology Centre
University of Padua
Via Trieste 75, 35121 Padua,
                                                                                                                                                                                                                     Lanfranchi,G., Muraro,T., Caldara,F., Pacchioni,B., Pallavicini Pandolfo,D., Toppo,S., Trevisan,S., Scarso,S. and Valle,G. Identification of 4370 expressed sequence tags from a 3'-end-specific cDNA library of human skeletal muscle by DNA sequencing and filter hybridization Genome Res. 6 (1), 35-42 (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                           403
HSPD05444 HM3 Homo sapiens cD
F20995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: smith@email.marc.usda.gov
Single pass sequencing. Bases called and alt_trimmed with phred
v0.980904.e. Vector identified by cross_match with the -minscore 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Contact: Smith TPL
USDA, ARS, US Meat Animal Research Center
PO Box 166, Clay Center, NE 68933-0166, USA
Tel: 402 762 4366
                                                                                                  ABI Chromatograms and other information are available on WWW http://grup.bio.unipd.it.
                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                             Contact: Valle G.
                                                                                                                                                                                                                96276048
                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                              F20995.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Plate:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BACKWARD: GTTTTCCCAGTCACGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tel: 402 762 4366
Fax: 402 762 4390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FORWARD: AGGAAACAGCTATGACCAT
                                                                                                                                                                                                                                                                                                                                     (bases 1 to 403)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           te: 51 row: M column: 8 primer: ATTTAGGTGACACTATAG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRimers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -minmatch 12 options.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /organism-"Bos taurus"
/db_xref-"taxon:9913"
/clone_lib-"MARC 4BOV"
/tissue_type-"pooled"
/lab_host-"DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Library made from pooled tissue from day 20 and day 40 embryos."

1 154 c 138 q 134.
/clone="034-X4-13"
/clone_lib="HM3"
                                  /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                              GI:2060171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3.14
10.00
100.00%
100.00%
8.55%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        03 bp mRNA linear EST 17-MAY-
cDNA clone 034-X4-13, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels:
                                                                                                                                       Italy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EST 17-MAY-1999
                                                                                                                                                                                                                                                                                                                Pallavicini, A.,
```

```
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LOCUS
DEFINITION
 Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 11
BE035031/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-092-297-17 (1-117) x F20995 (1-403)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match:
                                                         Score:
                                                                            Pred.
                                                                                           Alignment Scores:
                                                                                                                                   ORIGIN
                                                                                                                                                   BASE COUNT
                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                          No.:
                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Мо
..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    297 GCCGTTGTGCCTCTCGCAAGAACACAA 271
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       66 AlaValValProLeuAlaArgThrGln 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mesembryanthemum crystallinum
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnollophyta; eudicotyledons; core eudicots;
Caryophyllidae; Caryophylliales; Alzoaceae; Mesembryanthemum.
1 (bases 1 to 527)
Bohnert, H. J., Borchert, C., Brazille, S., Brooks, J., Eaton, M., Ferred, H., Kawasaki, S., McCollough, A., Michalowski, C.B., Palacio, C.,
Scara, G., Wheeler, M. and Zepeda, G.R.
Functional Genomics of Plant Stress Tolerance
Unpublished (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    527 bp mRNA linear EST 07-c
MM01H04 MM Mesembryanthemum crystallinum cDNA 5' similar to
elongation factor 1-beta, mRNA sequence.
BE035031
                                                                                                                                                                                                                                                                                                               An open reading frame exists.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                  Bio Sciences West room 513,
Tel: 520-621-7982
Fax: 520-621-1697
Email: cbm@u.arizona.edu
                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Michalowski, C.B.
                                                                                                                                                                                                                                                                                                                                                                                                                           University of Arizona
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   common ice plant.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BE035031.1
                                                                                                                                                   148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                മ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ds cDNA was sonicated and size-selected in the range 350-550 bp. The 3' specific fragments were selected by streptavidin coated magnetic beads, ligated to non-palindromic BstXI adapters, NotI digested and directionally cloned into BstXI-NotI cut pcDNAII vector." 98 g 97 t 6 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /tissue_type="pectoral muscle (after mastectomy)"
/note="Vector: pcDNAII (Invitrogen); Site_1: BstXI;
Site_2: NotI; The library was constructed by G.
Lanfranchi. This library is not subtracted nor normalized.
The first strand cDNA was primed with a biotinylated oligo-dT-NotI primer
(5'-biotin-AACCCGGCTCGAGCGGCGCGTTTTTTTTTTTTTTTT-3'). The
                                                                                                                                           /cell_type="epidermal bladder cells"
/dev_stage="12 weeks old"
                                                                                                                                                                                                                                     /organism="Mesembryanthemum crystallinum"
/db_xref="taxon:3544"
/clone_llb="MM"
 30.9
9.00
100.00%
100.00%
7.69%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.00%
100.00%
7.69%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GI:8330040
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9.00
                                  Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                         Tucson,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels:
                                                                                                                                                                                                                                                                                                                                                                                                         AZ 85721, USA
527
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            403
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EST 07-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ferrea
```

Mismatches: Indels:

```
LOCUS
DEFINITION
                                                           RESULT 13
BH290179
                                                                                                                                                   Ş
                                                                                                                                                                                 US-09-092-297-17 (1-117) x AW610810 (1-208)
                                                                                                                    밁
                                                                                                                                                                                                                           Query Match:
DB:
                                                                                                                                                                                                                                                           Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                      BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                Pred.
                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AW610810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-092-297-17 (1-117) x BE035031 (1-527)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                                                                                                                                                                                                                                                                  ŏ
::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                 27 LeuCysSerHisGlyAlaProVal 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AspAspAlaValValProLeuAlaArg 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GATGACGCTGTCGTACCACTTGCTCGC 179
BH290179 275 bp DNA CH230-158J14.TJ CHORI-230 Segment 1 Rattus CH230-158J14, DNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus l to 200) NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap. National Cancer Institute, Cancer Genome Anatomy Project (CGAP), Tumor Gene Index
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Trace considered overall poor quality High quality sequence stop: 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unpublished (1997)
Other_ESTs: up37g05.y1
Contact: Robert_Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: cgapbs-r@mail.nih.gov
This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AW610810 208 bp mRNA linear EST 23. up37905.x1 Soares_mouse_NMGB_bcell Mus musculus cDNA clone IMAGE:2699192 3' similar to TR:000392 000392 UV RADIATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MGI:1034716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AW610810.1 GI:7315551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AW610810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               house mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESISTANCE ASSOCIATED GENE-LIKE ;, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                       51
                                                                                                                                                                                                                                                                                                                                                                             T 3']; double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pT7T3 vector. Library is normalized; constructed by Bento Soares and M.Fatima Bonaldo."

53. c 43 g 61 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /db_xref="taxon:10090"
/clone="IMAGE:2699192"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ocation/Qualifiers
                                                                                                                                                                                                                             113
8.00
100.00%
100.00%
6.84%
9
                                                                                                                                                                                                                                                       Conservative: Mismatches:
                                                                                                                                                                                                                                          Indels:
                                                                                                                                                                                                                                                                                                             Length:
                  norvegicus genomic clone
                                        linear
                                    GSS 30-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EST 23-MAR-2000
                                                                                                                                                                                                                                                                                   Š
```

```
AZ912795
LOCUS
                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
Query Match:
   REFERENCE
                                                                                       KEYWORDS
                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                            US-09-092-297-17 (1-117) x BH290179 (1-275)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JOURNAL
COMMENT
                                                                        SOURCE
                                                                                                          VERSION
                                                                                                                               ACCESSION
                                                                                                                                                                                                                       RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                        Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
VERSION
                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                      142 ATTTCAAGGCTTCTTTGCTCTCAC 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                       23 IleSerArgLeuLeuCysSerHis 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (http://www.chori.org/bacpac/rat/30.htm). For BAC library availability, please contact Pieter de Jong (pdejong@mail.cho.or Clones may be purchased from BACPAC Resources (http://www.chori.org/bacpac/or ering_information.htm). BAC end page: http://www.tigr.org/tdb/bac_ends/rat/bac_end_intro.html Seq primer: SP6
                                                                                                                           AZ912795
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus 1 (bases 1 to 340)
                                                                                         GSS.
                                                  Mus musculus
                                                                                                        AZ912795.1 GI:13231740
                                                                                                                                                              RPCI-24-163P16.TV RPCI-24 Mus
                                                                       house mouse.
                                                                                                                                                                             AZ912795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Department of Eukaryotic Genomics
The Institute for Genomic Research
9712 Medical Center Dr., Rockville,
Tel: 301 838 0200
Fax: 301 838 0208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Jong, P. and Fraser, C.M.
Rat BAC End Sequences from Library CHORI-230 EcoRI segment Unpublished (1999)
Other_GSSs: CH230-158J14.TV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Class: BAC ends.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Zhao, S., Shetty, J., Shatsman, S., Tsegaye, G., Geer, K., Shvartsbeyn, A., Gebregeorgis, E., Overton, L., Russell, D., Chen, D., Riggs, F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Norway rat.
Rattus norvegicus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               вн290179
вн290179.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: szhao@tigr.org
Clones are derived from the rat BAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Shaying Zhao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (bases 1 to 275)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gebregeorgis, E., C, P. and Fraser, C.M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note="Vector: pTARBAC2.1; Site_1: EcoRI; Site_2: EcoRI; CHORI-230 Rat (BN/SsNHsd/MCW) BAC library produced by Pieter de Jong"

80 c 58 g 76 t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /cell_type="Brain"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /sex="Female"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone_lib-"CHORI-230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /strain="BN/SsNHsd/MCW"
/db_xref="taxon:10116"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /clone="CH230-158J14"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          organism="Rattus norvegicus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                              100.00%
100.00%
6.84%
                                                                                                                                                                                                                                                                                                                                                                                                                                    154
8.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GI:17202587
                                                                                                                                                                             340 bp
                                                                                                                                                                                                                                                                                                                                                                                                                Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                Mismatches:
Indels:
                                                                                                                                                             musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Segment 1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   de Jong (pdejong@mail.cho.org).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MD 20850,
                                                                                                                                                             genomic
                                                                                                                                                                                                                                                                                                                                                           275
8
0
0
                                                                                                                                                             clone
                                                                                                                                                         GSS 05-MAR-2001
e RPCI-24-163P16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            de
```

```
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                             ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-092-297-17 (1-117) x AZ912795
                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                      BF912018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                          VERSION
                                                                                                                                                                                                                                                                                                                                                                       Sn
20
                                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                AUTHORS
    JOURNAL
                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                 131 GTTCCATTGGCTCGCACACAAACA 154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ValProLeuAlaArgThrGlnThr 75
                                                             Homo Sapiens

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Bukaryota; Metazoa; Chordata; Catarrhini; Hominidae; Homo.

Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 415)

Dias Neto,E., Garcia Correa,R., Verjovski-Almeida,S., Briones,M.R.,

Nasai,M.A., da Silva,W. Jr., Zago,M.A., Bordin,S., Costa,F.F.,

Goldman,G.H., Carvalho,A.F., Matsukuma,A., Baia,G.S., Simpson,D.H.,

Brunstein,A., deOliveira,P.S., Bucher,P., Jongeneel,C.V., O'Hare

,M.J., Soares,F., Brentani,R.R., Reis,L.F., de Souza,S.J. and
                                                                                                                                                                                                                                                                                                                         415 bp mRNA linear IL2-UT0073-121100-232-D01 UT0073 Homo sapiens cDNA, BF912018
                         Simpson, A.J.
Shotgun sequencing of the human transcriptome with ORF
                                                                                                                                                                                                                                                                                         EST
                                                                                                                                                                                                                                                                                                        BF912018.1 GI:12303476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (pdejong@mail.cho.org). Clones may be purchased from BACPAC Resources (http://www.chori.org/bacpac/orderingframe.htm). BAC page: http://www.tigr.org/tdb/bac_ends/mouse/bac_end_intro.html Plate: 163 row: P column: 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tsegaye,G., Geer,K., Krol,M., Shvartsbeyn,A., Russell,D., de Jong,P. and Fraser,C.M.
Mouse BAC End Sequences from Library RPCI-24
Unpublished (199)
Other_GSSs: RPCI-24-163P16.TJ
                     sequence tags
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Clones are derived from the mouse BAC library RPCI-24. For BAC library availability, please contact Pieter de Jong (pdejong@mail.cho.org). Clones may be purchased from BACPAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Department of Eukaryotic Genomics
The Institute for Genomic Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact: Shaying Zhao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Zhao, S., Nierman, W., Malek, J., Shatsman, S., Akinret, B., Levins, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Medical Center Dr., Rockville, MD 301 838 0200 301 838 0208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                94
    Natl.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 szhao@tigr.org
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /cell_type="Spleen/Brain"
/note="Vector: pTARBAC1; Site_1: BamH1; Site_2: BamH1;
/note="Vector: pTARBAC1; Site_1: BamH1; Site_2: BamH1;
/note="Vector: pTARBAC1; Site_2: BamH1; Sites using Mboi partially digested male C57BL/6J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /sex=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /db_xref="taxon:10090"
/clone="RPCI-24-163P16"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Mus musculus"
/strain="C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /clone_lib="RPCI-24"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             196
8.00
100.00%
100.00%
6.84%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ends.
  Acad.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            row: P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            a
Sci. U.S.A. 97 (7),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            column:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          81 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (1-340)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            86 t
3491-3496 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20850, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        000084
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gebregeorgis, E.
                                                                                                                                                                                                                                                                                                                                            mRNA sequence
                                                                                                                                                                                                                                                                                                                                                             EST 18-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 de Jong. The rector at the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              end
```

```
Search completed: November Job time: 1693 secs
                                                                                Вþ
                                                                                                                    QΥ
                                                                                                                                                                                                                   Best Local Similarity:
Query Match:
                                                                                                                                                       US-09-092-297-17 (1-117) x BF912018 (1-415)
                                                                                                                                                                                                                                                             Percent Similarity:
                                                                                                                                                                                                                                                                                 Score:
                                                                                                                                                                                                                                                                                                Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                                                                               BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
                                                                            354 ATATTCTGCATTTCCCGTTTACTA 377
                                                                                                                  20 IlePheCysIleSerArgLeuLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: asimpson@ludwig.org.br
This sequence was derived from the FAPESP/LICR Human Cancer Genome
Project. This entry can be seen in the following URL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 andar, 01509-010, Sao Paulo-SP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tel: +55-11-2704922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20202663
Contact: Simpson A.J.G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            High quality sequence stop: 409.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (http://www.ludwig.org.br/scripts/gethtml2.pl?ti=IL2&t2=IL2-UT0073-
221100-232-D01&t3-2000-11-12&t4-1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               primer: puc 18 forward
                                                                                                                                                                                                                                                                                                                                                                           /note="Organ: uterus_tumor; Vector: puc18; Site_1: SmaI; Site_2: SmaI, A min1-library was made by cloning products derived from ORESTES PCR (U.S. Letters Patent application No. 196,716 - Ludwig Institute for Cancer Research) profiles into the pUC 18 vector. Reverse transcription of tissue mRNA and cDNA amplification were performed under low stringency conditions."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone_lib="UT0073"
/dev_stage="Adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                   100.00%
100.00%
6.84%
                                                                                                                                                                                                                                                                             8.00
                  ω
'
                                                                                                                    27
                                                                                                                                                                                              Indels:
Gaps:
                                                                                                                                                                                                                                                                             Length:
Matches:
                                                                                                                                                                                                                                      Conservative: Mismatches:
                                                                                                                                                                                              0
0
0
0
```

```
Command line parameters:

-MODEL-*frame+_p2n.model -DEV-xlh
-MODEL-*frame+_p2n.model -DEV-xlh
-Q-/cgn2_1/USPTO_Spool_VG09092297/runat_29102002_093923_21777/app_query.fasta_1.263
-Q-/cgn2_1/USPTO_Spool_VG09092297/runat_29102002_093923_21777/app_query.fasta_1.263
-DB-EST -QFMT-*fastap -SUFFIX-p2n.rst -MINNATCH-0.1 -LOOPCL-0 -LOOPEXT-0
-UNITS-blits -START-1 -END-1 -MATRIX-blosum62 -TRANS-human40.cdi -LIST-45
-DOCALIGN-200 -THR_SCORE-pct -THR_MAX-100 -TH_MIN-0 -ALIGN-15 -MODE-LOCAL
-OUTFMT-pto -NORM-ext -HEAPSIZE-500 -MINLEN-0 -MAXIEN-200000000
-USER-US09092297_@CGN_1_1_763_@runat_29102002_093923_21777 -NCPU-6 -ICPU-3
-NO_XIPXY -NO_MMAP -LARGEQUERY -NEG_SCORES-0 -WART -LONGLOG -DEV_TIMEOUT-10
-WARN_TIMEOUT-30 -THREADS-1 -XGAPOP-10 -XGAPEXT-0.5 -FGAPOP-6 -FGAPEXT-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Post-processing: Minimum Match 0%
Maximum Match 10
Listing first 45
                                                                                                                                                                                                                                                                                                                                                                            Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OM protein - nucleic search,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     92:
                                                                                                            and
                                                                                                                                    Pred. No.
                                                                                                                       score greater
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB.
                                           Score
                                                                                                      d. No. is the number of results predicted by chance to have a
re greater than or equal to the score of the result being printed,
is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                length: 0
length: 2000000000
                                   Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Xgapop 10.0
Ygapop 10.0
Fgapop 6.0
Delop 6.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-092-297-17
668
     82.8
80.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 November 3, 2002, 03:06:09; Search time 1686 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13736207 seqs, 6748477542 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PLOPPRAMAPRGCIVAVFAI....
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GenCore version 5.1.3 Copyright (c) 1993 - 2002 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                      em_estin:*
em_estmu:*
                                                                                                                                                                                                 gb_est2:*
gb_htc:*
gb_gss:*
em_gss_hum:*
                                                                                                                                                                                                                                                                                            em_estov:*
em_estpl:*
                                                                                                                                                            em_gss_inv:*
em_gss_pln:*
em_gss_vrt:*
                                                                                                                                                                                                                                                       gb_est1:*
                                                                                                                                                                                                                                                                                                                                                             em_estba:*
                                                                                                                                                                                                                                                                  em_htc:*
                                                                                                                                                                                                                                                                                em_estro:*
                                                                                                                                                                                                                                                                                                                                                em_esthum:*
                                          Length DB
     729
828
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              •
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Xgapext
Ygapext
Fgapext
Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100%
45 summaries
                                           ij
    BG775059
BG775668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           frame_plus_p2n model
                                                                                SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ....INQNCDSARTSDDRLCRSVS 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (without alignments) 936.621 Million cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27472414
                                       Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cell updates/sec
  BG775059 602650023
BG775668 602650023
                                                                                                                               REFERENCE
AUTHORS:
TITLE
JOURNAL
                                                                                                                                                                                                                        ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                 RESULT 1
BG775059
                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                        LOCUS DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                  0000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               - 0
                                                                                                                                                                                                            ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                            93
. E6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           513

408.5

389.5

358.5

340.3

40.5

236.5

210.5

210.5

110.5

1178.5

1178.5

1177.5

1177.5

1170.5

1170.5
                                                                                                                                                                                                                                                                                                                                                                                               88.5
87.5
87.5
87.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      89.5
89.5
89.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  90.
                                                                                                                             Homo sapiens Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. 1 (bases 1 to 729) NH-MGC http://mgc.nci.nih.gov/. National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                           BG775059 729 bp mRNA linear EST 15-MAY-2001
602650023F1 NIH_MGC_40 Homo sapiens cDNA clone IMAGE:4761029 5',
mRNA sequence.
BG775059
BG775059.1 GI:14045376
         Email: cgapbs-r@mail.nlh.gov
Tissue Procurement: DCTD/DTP
CDNA Library Preparation: Ling Hong/Rubin Laboratory
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
                                                                                                                 Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
 LLCM1612
                                                                                                                                                                                                                                                                                                                                                                                               130
4482
7183
7483
7461
953
360
1156
1157
1156
1157
594
622
1575
878
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   650
1288
609
row: n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100
100
100
100
100
100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AA195677
BJ124893
BJ1144893
BJ115213
BJ113226
BJ1121757
BE01499
AZ10450149
AW795497
AW795497
AW795498
AW795498
AW795498
AW795498
AW795497
AW795497
AW795497
AW795497
AW795497
AW795497
AW795498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BE664072
BE664075
AW991605
BF911379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AA454642
AI275379
AI081371
AA760247
AI263445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BE122850
AA024389
AI806131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AA122680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AA456370
column:
                                                                                                                                                                                                                                                                                                                                                       ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                       A1263445 q107a04 x
AA195677 zx32h04 s
BJ124893 BJ124893
BJ104084 BJ104084
BJ115213 BJ103226
BJ11066 BJ112066
BJ112066 BJ112066
BJ112066 BJ12757
BE906149 FROT -33-3
AR795497 MR4-UM001
BJ0758488 BJ0588488
AQ256383 nDxb00168
BF341539 602013544
BF138520 601782977
AV193603 AV193603
AG115743 Pan trog1
BJ127189 BJ127189
BG244032 6023878089
BG387111 60245582
AA122680 mp94e05.r
AZ219997 Sheared D
AZ361346 1M0106D04
BF970881 602271542
AN555673 L0257811-
BG075243 H3145A06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AA456370 aa14e02.r
BE664072 148225 MA
BE664075 148231 MA
BE664075 148231 MA
AW991605 RC1-BN000
BF911379 112-UT007
BE122850 02_15 Hum
AA024389 ze74b01.r
A1806131 wf06c06.x
AA456254 zx99d06.x
AA456254 zx99d06.x
AA454642 zx99d06.s
AA454642 zx99d06.s
AA750247 vv74e06.r
```

Result No.

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                      RESULT 2
BG775668/c
                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                    VERSION
                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                멹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-092-297-17 (1-117) x BG775059 (1-729)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match:
                                                                                                                                                                                                                                                                  KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                 ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .
80
..
                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                               99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SThrPheArgValCysPheGluGlnCysCysProTrpThrPheMetValLysLeuIleAs 99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CACTGTTGCTATGATGCCGTCGTGCCCTTGGCCAGGACCCCAGACGTGTGGAAACTG 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TyrLeuMetLeuCysGlnProHisLysArgCysGlyAspLysPheTyrAspProLeuGln 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HisCysCysTyrAspAspAlaValValProLeuAlaArgThr-GlnThrCysGlyAsnCy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTTTTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCATGACTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TACCTGATGCTGTGCCAGCCACACAAGAGATGTGGGGACAAGTTCTACGACCCCCTGCAG
                                                                     Email: cgapbs-r@mail.nih.gov
Tissue Procurement: DCTD/DTP
                                                                                                                        Eukaryota; Metazoa; Chordata; Cr
Mammalia; Eutheria; Primates; Ca
1 (bases 1 to 828)
NIH MGC http://mgc.nci.nih.gov/.
National Institutes of Health, M
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                 BG775668 828 bp r 602650023T1 NIH_MGC_40 Homo sapiens
                                                                                                                                                                                                                                                                                                    mRNA sequence.
BG775668
                                                                                                         Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                               BG775668.1 GI:14045985
CDNA Library Preparation: Ling Hong/Rubin Laboratory CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc. Clone distribution information can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        High
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /tissue_type="carcinoma, cell line"
//lab_host="DH10B (phage-resistant)"
/note="Organ: prostate; Vector: pOTB7; Site_1: XhoI;
/note="Organ: prostate; Vector: pOTB7; Site_1: XhoI;
/note="Corgan: prostate; Vector: pOTB7; Sites using the following to cloned into EcoRI/XhoI sites using the following 5' adaptor: GGCACGAG(G). Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California; Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and Supersocript II RT (Life Technologies).

Note: this is a NIH_MGC Library."
1 others
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    quality sequence stop: 726.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /db_xref="taxon:9606"
/clone="IMAGE:4761029"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone_lib="NIH_MGC_40"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     'organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4.09e-47
553.00
98.99%
97.98%
82.78%
                                                                                                                                                                                       Chordata; Craniata; Vertebrata; Euteleostomi; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels:
                                                                                                                                        Mammalian
                                                                                                                                                                                                                                                                                                                                                  mRNA
                                                                                                                                                                                                                                                                                                                                cDNA clone IMAGE:4761029
                                                                                                                                        Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          729
97
0
1
                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                EST 15-MAY-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60
 ьe
```

```
REFERENCE
AUTHORS
                                                                                                                                         SOURCE
ORGANISM
                                                                                                                                                                                      ACCESSION
VERSION
                                                                                                                                                                                                                                                               RESULT 3
AA456370
                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                      õ
                                                                                                                                                                                                                                                                                                                                                                                                                                      망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Alignment :
Pred. No.:
                                                                                                                                                                       KEYWORDS
                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local S
Query Match:
                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                   POCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-092-297-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
    TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                               420
                                                                                                                                                                                                                                                                                                                           100 GlnAsnCysAspSerAlaArgThrSerAspAspArgLeuCysArgSerValSer 117
                                                                                                                                                                                                                                                                                                                                                                         479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAGAACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGC
                                                                                                                                                                                                                                                                                                                                                                                    ThrPheArgValCysPheGluGlnCysCysProTrpThrPheMetValLysLeuIleAsn
                                                                                                                                                                                                                                                                                                                                                                      ACCTTCAGAGTCTGCTTTGAGCAGTGCTGCCC-TGGACCTTCATGGTGAAGCTGATAAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity:
Homo sapiens

Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Butheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 412)

Hillier,L., Allen,M., Bowles,L., Dubuque,T., Geisel,G., Jost,S., Kucaba,T., Lacy,M., Le,N., Lennon,G., Marra,M., Martin,J., Moore,F., Schellenberg,K., Steptoe,M., Tan,F., Theising,B., White,Y., Wyll, T., Waterston,R. and Wilson,R.

WashU-Merck EST project 1997,

Unpublished (1997)
                                                                                                                                                                                                         412
aal4e02.rl Soares_NhHMPu_S1 E
5', mRNA sequence.
AA456370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    High quality sequence start: 16
High quality sequence stop: 806.
Location/Qualifiers
                                                                                                                                                       human .
                                                                                                                                                                       AA456370.1
EST.
                                                                                                                                                                                                      AA456370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       http://image.llnl.gov
Plate: LLCM1612 row: n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (1-117) x BG775668 (1-828)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /clone_lib="NIH_MGC_40"
/tissue_type="carcinoma, cell line"
/tissue_type="carcinoma, cell line"
/lab_host="DH10B (phage-resistant)"
/note="Organ: prostate; Vector: pOTB7; Site_1: XhoI;
Site_2: EcoRI; cDNA made by oligo-dT priming.
Directionally cloned into EcoRI/XhoI sites using the following 5 adaptor: GGCACGAG(G). Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies).
Note: this is a NIH_MGC_Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /db_xref="taxon:9606"
/clone="IMAGE:4761029"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            organism=".Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2.74e-45
536.00
98.98%
97.96%
80.24%
                                                                                                                                                                                      GI:2178946
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels:
                                                                                                                                                                                                                                               đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          190 t
                                                                                                                                                                                                                              mRNA
sapiens
                                                                                                                                                                                                                            linear
cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 828
96
1
1
0
                                                                                                                                                                                                                              EST 06-JUN-1997
IMAGE:813242
                                                                                                                                                                                                                                                                                                           367
                                                                                                                                                                                                                                                                                                                                                                                                    99
                                                                                                                                                                                                                                                                                                                                                                                                                                   480
                                                                                                                                                                                                                                                                                                                                                                                                                                                              79
                                                                                                                                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         600
                                              ore, B.
Wylie
```

```
Š
                                                                                                                                                                                       В
                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                      Ş
                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                             US-09-092-297-17 (1-117) x AA456370 (1-412)
                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BASE COUNT
ORIGIN
                                           VERSION
                                                       ACCESSION
                                                                     DEFINITION
                                                                                  Locus
                                                                                               BE664072
                                                                                                         RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
    ORGANISM
                                                                                                                                     242
                                                                                                                                                              105
                                                                                                                                                                                        182
                                                                                                                                                                                                                                         122
                                                                                                                                                                                                                 85
                                                                                                                                                                                                                                                                   65
                                                                                                                                                                                                                                                                                             62
                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                       25
                                                                                                                               CAGCCACACAGAGATGTGGGGACAAGTTCTACGACCCCCTGCAGCACTGTTGCTATGAT 121
                                                                                                                                                                                                                                                                                                     ArgLeuLeuCysSerH1sGlyAlaProValAlaProMetThrProTyrLeuMetLeuCys
                                                                                                                                                                                                                                                                                                                                        AGGCTCCTCTCACACGGAGCCCCAGTGGC-CCCATGACTCCTTACCTGATGCTGTGC
                           BE664072 554
148225 MARC 4BOV Bos taurus
BE664072
BE664072.1 GI:10023165
EST.
    Bos taurus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: estéwatson.wustl.edu
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
Seq primer: -28ml3 rev2 ET from Amersham
High quality sequence stop: 398.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4444 Forest Park Parkway,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Washington University School of Medicine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Wilson RK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note-"Organ: mixed (see below); Vector: pT7T3D-Pac (Pharmacia) with a modified polylinker; Site_1: Not I; Site_2: ECO RI; Equal amounts of plasmid DNA from three normalized libraries (melanocyte 2NbHM, pregnant uterus NbHPU, and fetal heart NbHH19W) were mixed, and scircles were made in vitro. Following HAP purification, this DNA was used as tracer in a subtractive hybridization reaction. The driver was PCR-amplified cDNAs from pools of 5,000 clones made from the same 3 libraries. The pools consisted of I.M.A.G. Clones 360232-265223, 340488-34549, and 484488-449479."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone_lib="Soares_NhHMPu_S1"
/tissue_type="Pooled human melanocyte, fetal heart,
pregnant uterus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /db_xref="taxon:9606"
/clone="IMAGE:813242"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /db_xref="GDB:6044152"
                                                                                                                                                                                                                                                                                                                                                                                                                                2.49e-43
513.00
98.92%
98.92%
76.80%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  host="DH10B"
                                                                  554 bp
rus cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Box 8501, St.
                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches:
Indels:
                                                               mRNA linear
5', mRNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Louis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MO 63108
                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                             84
                                                                                                                                                                                                                                                                                                                64
                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and
밁
                     Q
                                                В
                                                                      Ş
                                                                                                   밁
                                                                                                                        δÃ
                                                                                                                                                      밁
                                                                                                                                                                            γQ
                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
MEDLINE
COMMENT
                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
                                                                                                                                                                                                                                                                                                                                                   Query Match:
                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                             Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                            Score:
                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment
                                                                                                                                                                                                                                                                                                                                                                                                                                                          BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
312
                                                252
                                                                          8
                                                                                                                                                                                                          72
                                                                                                                                                                                                                                 26
                                                                                                                                                                                                                                                            12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PCR PRimers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21180013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Keele, J.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bovidae; Bovinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         128
                                                                                                                                                                                                                                                                                                                                                                                                                                                         D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         . 554
```

```
US-09-092-297-17 (1-117) x BE664072 (1-554)
                                                                                                                                                                                            192 GCCATGGTACCCTTGGGCAGGACCCGGAAGTGTGGGAACTGCACCTTTAGGGTCTGCTTC
                                                                                                                                                                                                                                                                                            132 TCACAAGAGCGATGCGGGGACCAGTTCTACGACCCCCGGCAGGACTGTTGCTATGACGAT
                                                                                                                                                                                                                      66 AlaValValProLeuAlaArgThrGlnThrCysGlyAsnCysThrPheArgValCysPhe
                                                                                                                                                                                                                                                                                                                           46 ProHisLysArgCysGlyAspLysPheTyrAspProLeuGlnH1sCysCysTyrAspAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6 ArgAlaMetAlaProArgGlyCysIleValAlaValPheAlaIlePheCysIleSerArg 25
GTCAAAATTGTTACTCGGGTGTATCCTCAGACGATCGGGTTTGT
                                                                                          AAGCAGTGCTGCCCGTGGTTGGTCAACAGGCCCCAGGAGTCCTTCGTGGTGAAGGTGAAA 311
                                      AsnGlnAsnCysAspSerAlaArgThrSerAspAspArgLeuCys 113
                                                                                                                                           GluGlnCysCysProTrp-----
                                                                                                                                                                                                                                                                                                                                                                                                                             LeuLeuCysSerHisGlyAlaProValAlaProMetThrProTyrLeuMetLeuCysGln 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGAGCCATGACTCCACGACGCTGCATCCTGGCTGTCTTGGCCGCTGTCTGCATCCTTTTG
                                                                                                                                                                                                                                                                                                                                                                                                 CTTCTCTGTTCACATGCTGCCCCAGTGTCCCCCACAGGCACTCAGCTGTTGCTGTGCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BACKWARD: GTTTTCCCAGTCACGACG
Plate: 51 row: M column: 8
Seq primer: ATTTAGGTGACACTATAG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tel: 402 762 4366
Fax: 402 762 4390
Email: smith@email.marc.usda.gov
Single pass sequencing. Bases called and alt_trimmed with phred
v0.980904.e. Vector identified by cross_match with the -minscore
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence evaluation of four pooled-tissue normalized bovine cDNA libraries and construction of a gene index for cattle genome Res. 11 (4), 626-630 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 (bases 1 to 554)
Smith, T.P. L., Grosse, W.M., Freking, B.A., Roberts, A.J., Stone, R.T., Smith, T.P. L., Grosse, W. Mite, J., Cho, J., Fahrenkrug, S.C., Bennett, G.L., Heaton, M.P., Laegreid, W.W., Rohrer, G.A., Chitko-McKown, C.G., Pertea, G., Holt, I., Karamycheva, S., Liang, F., Quackenbush, J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 USDA, ARS, US Meat Animal Research Center
PO Box 166, Clay Center, NE 68933-0166, USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FORWARD: AGGAAACAGCTATGACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 and -minmatch 12 options.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Contact: Smith TPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Library made from pooled tissue from day .20 and day 40 embryos."

154 c 138 a 17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /organism="Bos taurus"
/db_xref="taxon:9913"
/clone_lib="MARC 4BOV"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /tissue_type="pooled"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2.19e-32
408.50
73.91%
62.61%
61.15%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative: Mismatches:
                                                                                                                                           ----ThrPheMetValLysLeuIle 98
356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    :a; Euteleostomi;
Pecora; Bovoidea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -minscore
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bovoidea;
                                                                                                                                                                                                                                             85
                                                                                                                                                                                                                                                                                              191
                                                                                                                                                                                                                                                                                                                                                65
                                                                                                                                                                                                                                                                                                                                                                                                 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              71
                                                                                                                                                                                               25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18
```

```
밁
                                                                                                                                                                                                                      ş
     Š
                                          밁
                                                                          Ş
                                                                                                                 밁
                                                                                                                                               δõ
                                                                                                                                                                                                                                                         US-09-092-297-17 (1-117) x BE664075 (1-555)
                                                                                                                                                                                                                                                                                                                     Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                     BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 5
BE664075
                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                             Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                                                                                                                                                                                                                                                                                                                                                                                             No:
                                          132
       66
                                                                              46
                                                                                                                                                                                  12 AGAGCCATGACTCCACGACGCTGCATCCTGGCTGACTTGGCCGCTGTCTGCATCCTTTTG
                                                                                                                   72
                                                                                                                                                     26
                                                                                                                                                                                                                   6 ArgAlaMetAlaProArgGlyCysIleValAlaValPheAlaIlePheCysIleSerArg
                                    TCACAAGAGCGATGCGGGGACCAGTTCTACGACCCCGGCAGGACTGTTGCTATGACGAT
                                                                                                           CTTCTCTGTTCACATGCTGCCCCAGTGTCCCCCACAGGCACTCAGCTGTTGCTGTGCCAG
AlaValValProLeuAlaArgThrGlnThrCysGlyAsnCysThrPheArgValCysPhe
                                                           ProHisLysArgCysGlyAspLysPheTyrAspProLeuGlnHisCysCysTyrAspAsp 65
                                                                                                                                              LeuLeuCysSerHisGlyAlaProValAlaProMetThrProTyrLeuMetLeuCysGln 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           USDA, ARS, US Meat Animal Research Center PO Box 166, Clay Center, NE 68933-0166, USA Tel: 402 762 4366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FORWARD: AGGAACAGCTATGACGAT
BACKWARD: GTTTTCCCAGTCACGACG
Plate: 51 row: N column: 8
Seg primer: ATTTAGGTGACACTATAG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Smith, T.P.L., Grosse, W.M., Freking, B.A., Roberts, A.J., Stone, R.T., Casas, E., Wray, J.E., White, J., Cho, J., Fahrenkrug, S.C., Bennett, G.L., Heaton, M.P., Laegreid, W.W., Rohrer, G.A., Chitko-McKown, C.G., Pertea, G., Holt, I., Karamycheva, S., Liang, F., Quackenbush, J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Email: smith@email.marc.usda.gov
Single pass sequencing. Bases called and alt_trimmed with phred
v0.980904.e. Vector identified by cross_match with the -minscore 18
and -minmatch 12 options.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tel: 402 762 4366
Fax: 402 762 4390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Smith TPL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence evaluation of four pooled-tissue normalized bovine cDNA libraries and construction of a gene index for cattle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bovidae; Bovinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bos taurus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BE664075.1 GI:10023171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BE664075
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BE664075 555 bp mRNA linear 148231 MARC 4BOV Bos taurus cDNA 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PCR PRimers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Keele, J.W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21180013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Genome Res. 11 (4), 626-630 (2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (bases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="Bos taurus"
/db_xref="taxon:9913"
/clone_lib="MARC 4BOV"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="Vector: pCMV SPORT6; Site_1: XbaI; Library made from pooled tissue from day 2 pmbruos "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /tissue_type="pooled"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 to 555
                                                                                                                                                                                                                                                                                                                 1.99e-30
389.50
71.30%
60.87%
58.31%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Butheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ດ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q
                                                                                                                                                                                                                                                                                                                   Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                             Gaps:
                                                                                                                                                                                                                                                                                                                                                                        Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   135
                                                                                                                                                                                                                                                                                                                   70
12
76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Site_2: xhoI;
20 and day 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       25-APR-2001
 85
                                      191
                                                                                                                                                                                    71
```

```
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCUS
                                                                                                                                                                                              ORIGIN
US-09-092-297-17 (1-117) x AW991605 (1-533)
                                                            Query Match:
                                                                          Best Local Similarity:
                                                                                                  Percent Similarity:
                                                                                                                    Score:
                                                                                                                                      Pred. No.:
                                                                                                                                                          Alignment Scores:
                                                                                                                                                                                                              BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AW991605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   192 GCCATGGTACCCTTGGGCAGGACCCGGAAGTGTGGGAACTGCACCTTTACGGTCTGCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       252 GAGCACTGCTGCCCGTGGTTGGTCAACAGGCCCCATGAGTCCTTCGTGGTGAAGGTGAAA 311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGTCAAAATTGTTACTCGGCTGTATCCTCATACGATCGGGTTTGT 356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AsnGlnAsnCysAspSerAlaArgThrSerAspAspArgLeuCys 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Project. This entry can be seen in the following URL (http://www.ludwig.org.br/scripts/gethtml2.p1?t1=&t2=RC1-BN0005-030 500-015-907&t3-2000-05-03&t4=1) Seg primer: puc 18 forward High quality segments.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 53)

Dias Neto, E., Garcia Correa, R., Verjovski-Almeida, S., Briones, M.R., Nagai, M.A., da Silva, W. Jr., Zago, M.A., Bordin, S., Costa, F.F., Goldman, G.H., Carvalho, A.F., Matsukuma, A., Baia, G.S., Simpson, D.H., Brunstein, A., deoliveira, P.S., Bucher, P., Jongeneel, C.V., O'Hare
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AW991605
AW991605.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 High quality sequence start: 16
High quality sequence stop: 533.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Simpson A.J.G.
Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 andar, 01509-010,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Shotgun sequencing of the human transcriptome with ORF expressed sequence tags
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tel: +55-11-2704922
Fax: +55-11-2707001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AW991605
RC1-BN0005-030500-015-g07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Simpson, A.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Proc. Natl.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            M.J., Soares, F., Brentani, R.R.,
                                                                                                                                                                                                                116
                                                                                                                                                                                                                                                            /note-"Organ: breast_normal; Vector: puc18; Site_1: SmaI; Site_2: SmaI, A mini-library was made by cloning products derived from ORESTES PCR (U.S. Letters Patent application No. 196,716 - Ludwig Institute for Cancer Research) profiles into the pUC 18 vector. Reverse transcription of
                                                                                                                                                                                                              tissue mRNA and cDNA amplification were performed under low stringency conditions."

156 c 150 g 111 t
                                                                                                                                                                                                                                                                                                                                                                                    /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone_lib="BN0005"
                                                                                                                                                                                                                                                                                                                                                                  'dev_stage="Adult"
                                          2.95e-27
358.50
94.52%
94.52%
53.67%
9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GI:8251660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Acad. Sci. U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            533 bp mRNA linear
BNOOO5 Homo sapiens cDNA,
                                                                                                                Length: Matches:
                                        Gaps:
                                                                            Mismatches:
                                                                                              Conservative:
                                                          Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (7),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Reis,L.F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3491-3496 (2000)
                                    0 4 E C O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          de Souza, S.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sao Paulo-SP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   251
```

147 94 87

```
BASE COUNT
ORIGIN
     Pred. No.:
Score:
                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 7
BF911379
                                     Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /ERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cocus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AUTHORS
                                                                                                                                                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  85 PheGluGlnCysCysProTrpThrPheMetValLysLeuIleAsnGlnAsnCysAspSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        69 GATGCCGTTGTGCCCTTGGCCAGGACCCAGACGTGTGGAAACTGCACCTTCAGAGTCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGC 227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AlaArgThrSerAspAspArgLeuCysArgSerValSer 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCTGATAAACCAGAACTGCGACTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAGCCACACAAGAGATGTGGGGACAG-TTCTACGGCCCCCT-CAGCACTG-TGCTATGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AspAlaValValProLeuAlaArgThrGlnThrCysGlyAsnCysThrPheArgValCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This sequence was derived from the FAPESP/LICR Human Cancer Genome Project. This entry can be seen in the following URL (http://www.ludwig.org.br/scripts/gethtm12.pl?tl=IL2&t2=IL2-UT0073-081100-213-D02&t3=2000-11-08&t4=1)
Seq Primer: puc 18 forward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 (bases 1 to 201)
Dias Neto, E., Garcia Correa, R., Verjovski-Almeida, S., Briones, M.R., Nagai, M.A., da Silva, W. Jr., Zago, M.A., Bordin, S., Costa, F., Goldman, G.H., Carvalho, A.F., Matsukuma, A., Bala, G.S., Simpson, D.H., Brunstein, A., deOliveira, P.S., Bucher, P., Jongeneel, C.V., O'Hare, M.J., Soares, F., Brentani, R.R., Reis, L.F., de Souza, S.J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sequence tags
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Shotgun sequencing of the human transcriptome with ORF expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BF911379.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IL2-UT0073-081100-213-D02
BF911379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mail: asimpson@ludwig.org.br
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Simpson A.J.G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BF911379
                                                                                                                                                                                                                                                                                                                                             quality sequence start: 13 quality sequence stop: 201. Location/Qualifiers
                                                                                                 39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          +55-11-2707001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            +55-11-2704922
                                                                                                 O)
                                                                                                                                             /note "Organ: uterus_tumor; Vector: puc18; Site_1: SmaI; Site_2: SmaI, A mini-library was made by choning products derived from ORESTES PCR (U.S. Letters Patent application No. 196,716 Ludwig Institute for Cancer Research) profiles into the pUC 18 vector. Reverse transcription of
                                                                                                                                                                                                                                                 /dev_stage-"Adult"
                                                                                                                                                                                                                                                                     /clone_lib="UT0073"
                                                                                                                                                                                                                                                                                         'db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                         organism="Homo sapiens"
                                                                                             issue mRNA and cDNA amplification were performed ow stringency conditions."
63 c 51 g 48 t
   6.33e-26
340.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GI:12302837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sci.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         201 bp
2 UT0073
Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4 andar, 01509-010,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (7), 3491-3496 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mRNA
58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear '
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cDNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sao Paulo-SP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EST 18-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOURCE
ORGANISM
             BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 8
BE122850/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-092-297-17 (1-117) x BF911379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              95 ValLysLeuIleAsnGlnAsnCysAspSerAlaArgThrSerAspAspArgLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTGAAGCTGATAAACCAGAACTGCGACTCAGCCCGGACCTCAGATGACAGGCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ThrCysGlyAsnCysThrPheArgValCysPheGluGlnCysCysProTrpThrPheMet
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACGTGTGGAAACTGCACCTTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: John.Schlager@AMEDD.ARMY.MIL
Seq primer: FOrward Seq Primer: GCCAGTGTGATGGATATCTG;
Primer: GCTCGGATCCACTAGTAACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BE122850
02_15 Hur
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Molecular Toxicology
United States Army Mo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Schlager, J.J., Benjamin, H.R., Ali, K., Levine, C.F., Avery, D.P. and Clark, J.H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tel: 410 436 1940 Fax: 410 436 1960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Schlager, J.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unpublished (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Transcripts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Transcripts Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3100 Ricketts Point Road;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mammalia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BE122850.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sapiens chromosome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                USAMRICD)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (bases 1 to 366)
           101
                                                                                                                                                                                                                                                                                                                                                                                                                                  quality sequence stop:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               850 366 bp mRNA linear EST Human Epidermal Keratinocyte Subtraction Library-cripts Homo sapiens cDNA clone 02_15 5' similar to ns chromosome 19, mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Epidermal Keratinocyte
           ρ
                                                         /dev_stage="adult"
/lab_host="E. coli (ampicillin-resistant)"
/lab_host="E. coli (ampicillin-resistant)"
/note="Vector: pT-Adv; Library preparation: Sequence
/note="Vector: pT-Adv; Library preparation: Sequence
Lsolated using PCR-select (Clontech) subtraction library
construction (Diatchenko et al., (1996) Proc. Natl. Acad.
Sci. USA 93: 6025-6030) after sulfur mustard exposure of
Sci. USA 93: 6025-6030) after sulfur mustard exposure of
                                   primary human adult epidermal keratinocytes. Subtractio
library cloned for random sequence selection into pT-Adv
vector."
                                                                                                                                                                                                                                                             /clone_lib="Human Epidermal Keratinocyte
Library- Upregulated Transcripts"
/sex="female"
                                                                                                                                                                                                 /tissue_type="skin"
/cell_type="primary keratinocyte"
/cell_line="Clonetics 4075"
                                                                                                                                                                                                                                                                                                                   /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="02_15"
                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; 
Sutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.00%
100.00%
50.90%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GI:8514955
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Medical
         103 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (1-201)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTN: MCMR-UV-PA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                        366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Subtraction Library-
           70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Institute of Chemical Defense
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APG-EA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Dodds, A.D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MD 21010-5400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Reverse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       r 26-OCT-2000
· Upregulated
› Homo
```

Seq

```
AA024389
LOCUS
                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-092-297-17 (1-117) x BE122850 (1-366)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 몂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment
                                                                                                                                                                                                                                                                                                                       MEDLINE
                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORGANISM
                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27 LeuCysSerHisGlyAlaProValAlaProMetThrProTyrLeuMetLeuCysGlnPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7 AlaMetAlaProArgGlyCysIleValAlaValPheAlaIlePheCysIleSerArgLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGCATGAGGCCACGATGCTGCATCTTGGCTCTTGTCTGCTGGATAACAGTCTTCCTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GluGlnCysCysProTrpThr-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HisLysArgCysGlyAspLysPheTyrAspProLeuGlnHisCysCysTyrAspAspAla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAGTGTTCAAAAGGAACTACAGACGCTCCTGTTGGCTCAGGACTGTGGCTGTGCCAGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAGCTCTGCTGCCGAGTCTTTTGGCCCCCAGCAGAAGTTTCTTGTGAAGTTG 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACACCCAGGTGTGGGAACAAGATCTACAACCCTTCAGAGCAGTGCTGTTATGATGATGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATCTTATCCTTAAAGGAGACCCGCCGCTGTGGCTCCACCTGCACCTTCTGGCCCTGCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scores:
                                                                                                                                                                                                                                                                                                                    Chissoe, S., Dietrich, N., DuBuque, T., Favello, A., Gish, W., Hawkins M., Hultman, M., Kucaba, T., Lacy, M., Le, M., Le, N., Mardis, E., Moore, B., Morris, M., Parsons, J., Prange, C., Rifkin, L., Rohlfing, T., Schellenberg, K., Soares, M.B., Tan, F., Thierry-Meg, J., Trevaskis, E., Underwood, K., Wohldmann, P., Waterston, R., Wilson, R. and Marra, M. Generation and analysis of 280,000 human expressed sequence tags 97044478
                                                                                                                                                   This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information insert Length: 708 Std Error: 0.00 Seq primer: -28M13 rev2 from Amersham
                                                                                                                          High quality sequence stop: 335.
                                                                                                                                                                                                                                                                  Washington University School of Medicine 4444 Forest Park Parkway, Box 8501, St. )
                                                                                                                                                                                                                       Email: est@watson.wustl.edu
                                                                                                                                                                                                                                        Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                        Contact: Wilson RK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AA024389 537 bp mRNA
ze74b01.r1 Soares_fetal_heart_NbHH19W Homo
IMAGE:364681 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AA024389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            numan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AA024389.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                             (bases 1 to 537)
                /sex-"unknown"
                          /clone_lib="Soares_fetal_heart_NbHH19W"
                                                             /db_xref="taxon:9606"
                                                                            /organism="Homo sapiens"
/db_xref="GDB:1281385"
'dev_stage="19 weeks"
                                                /clone="IMAGE:364681"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GI:1489332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6.62e-15
236.50
61.22%
46.94%
35.40%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ----PheMetValLysLeu 97
                                                                                                                                                                                                                                                                  Louis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                    ŏ
                                                                                                                                                                                                                                                                     63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDNA
                                                                                                                                                                                                     contact the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     30-JAN-1997
clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            289
                                                                                                                                                                                                                                                                                                                 ACCESSION
VERSION
                          FEATURES
                                                                                                                                       COMMENT
                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                               SOURCE
                                                                                                                                                                                                                                                                                              KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE CO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred.
```

```
RESULT 10
AI806131/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-092-297-17 (1-117) x AA024389 (1-537)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
                                                                                                                                                     AUTHORS
TITLE
                                                                                                                                                                                                                                ORGANISM
                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       No:
                                                                                                                                                                                                                                                                                                                                                                                               262 GAGCTCTGCTGCTCCGAGTCTTTTGGCCCCCAGCAGAAGTTTCTTGTGAAGTTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                       202 ATCTTATCCTTAAAGGAGACCCGCCGCTGTGGCTCCACCTGCACCTTCTGGCCCTGCTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          47 HisLysArgCysGlyAspLysPheTyrAspProLeuGlnHisCysCysTyrAspAspAla
                                                                                                                                                                                                                                                                                                                                                                                                                            86 GluGlnCysCysProTrpThr------PheMetValLysLeu 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          27 LeuCysSerHisGlyAlaProValAlaProMetThrProTyrLeuMetLeuCysGlnPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7 AlaMetAlaProArgGlyCysIleValAlaValPheAlaIlePheCysIleSerArgLeu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CACCC-AGGTGTGGGAACAAGATCTACAACCCTTCAGAGCAGTGCTGTTATGATGATGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGTGTTCAAAAGGAACTACAGACGCTCCTGTTGGCTCAGGACTGTGGCTGTGCAGCCGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Contact: Robert Strausberg, Ph.D.
Email: cgapbs-remail.nih.gov
This clone is available royalty-free through LLNL;
IMAGE Consortium (info@image.llnl.gov) for further;
INSert Length: 1591 Std Error: 0.00
                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Primates; Catarrhini; Hominidae 1 (bases 1 to 481)
                                                                                                                                                                                                                                                                                             481 bp
wf06c06.xl Soares_NFL_T_GBC_S1 h
IMAGE:2349802 3', mRNA sequence
A1806131
               Seq primer: -40UP from Gibco High quality sequence stop: 4
                                                                                                                     Tumor Gene Index
Unpublished (1997)
                                                                                                                                             NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                             AI806131.1 GI:5392697
EST.
                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                123
               quality sequence stop: 447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NbHL19W."
142 c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       same fetus as the fetal lung library, Soares fetal lung
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5.33e-12
210.50
60.20%
45.92%
31.51%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            139 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches:
                                                                                                                                                                                                                                                                                                                      Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               127 t
                                                                                                                                                                                                                                                                                                                                   mRNA
                                                                                                                                                                                                                                                                                                                    sapiens cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       14
14
32
2
                                                                                                                                                                                                Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6 others
                                                                                                                                                                                                                                                                                                                                   linear
                                                                       contact the
                                                                                                                                                                                                               Euteleostom1;
                                                                                                                                                                                                                                                                                                                                   EST 18-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                               315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   66
                                                                                                                                                                                                                                                                                                                                                                                                                                                          261
```

source

'organism≖"Homo sapiens"

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-092-297-17 (1-117) x AIB06131 (1-481)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred. No.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              112 LeuCysArgSerValSer 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    405 TACAATGACGCCATCGTGTCCCTGAGCGAGACCCGCCAATGTGGTCCCCCCCTGCACCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      465 CTGTGCCAGCCGGCACCCAGGTGTGGAGACAAGATCTACAACCCCTTGGAGCAGTGCTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  43 LeuCysGlnProHisLysArgCysGlyAspLysPheTyrAspProLeuGlnHisCysCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LysLeu-----IleAsnGlnAsnCysAspSerAlaArgThrSerAspAspArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ArgValCysPheGluGlnCysCys------ProTrpThrPheMetVal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAGCTGAAGGTTCAGGGTGTGAATTGCCAGTGCCACTCATCTCCCATCTCCAGTAAG---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TyrAspAspAlaValValProLeuAlaArgThrGlnThrCysGly---AsnCysThrPhe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ---TGTGAAAGCAGAAGT 214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGGCCCTGCTTTGAGCTCTGCTGTCTTGATTCCTTTGGCCTCACAAACGATTTTGTTGTG
                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 523)

Hillier, L., Allen, M., Bowles, L., Dubuque, T., Geisel, G., Jost, S., Kucaba, T., Lacy, M., Le, N., Lennon, G., Marra, M., Martin, J., Moore, B., Schellenberg, K., Steptoe, M., Tan, F., Theising, B., White, Y., Wylle, T., Waterston, R. and Wilson, R. WashU-Merck EST Project 1997.

On the state of th
                                                            Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
                                                                                                                                                          Contact: Wilson RK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AA456254.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AA456254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AA456254. 523 bp mRNA linear EST 06-JUN-1997
ZX99406.rl Soares_NhHMPu_S1 Homo sapiens cDNA clone IMAGE:811883
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      , mRNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120
314 286 1800
314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note-"Organ: pooled; Vector: pT7T3D-Pac (Pharmacia) with a modified polylinker; Site_1: Not I; Site_2: Eco RI; Equal amounts of plasmid DNA from three normalized libraries (fetal lung NbHL19W, testis NHT, and B-cell NCI_CGAP_GCB1) were mixed, and scircles were made in vitro. Following HAP purification, this DNA was used as tracer in a subtractive hybridization reaction. The driver was PCR-amplified cDNAs from pools of 5,000 clones made from the same 3 libraries. The pools consisted of I.M.A.G.E. clones 297480-30287, 682632-687239, 726408-728711, and 729906-731399. Subtraction by Bento Sorres and M. Fatima Bonaldo. "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone_lib="Soares_NFL_T_GBC_S1"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone="IMAGE:2349802"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               db_xref-"taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GI:2179464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5.28e-10
190.50
58.14%
47.67%
28.52%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels:
Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 481
9
23
13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              286
```

B Qy

KEYWORDS SOURCE

VERSION

ACCESSION

AA456254 RESULT 11 Š 밁 Q В Q 밁 δÃ

COMMENT

ORGANISM

Homo sapiens

```
ACCESSION
VERSION
                                                                                                                           RESULT 12
AI572169
                                                                                                                                                                                   밁
                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                            γQ
                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                 KEYWORDS
                                                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-092-297-17 (1-117) x AA456254
                                                                                                            Pocus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                 493
                                                                                                                                                                                                                                                           433
                                                                                                                                                                                                                                                                                                                           373 CTGAGCGAGACCCGCCAATGTGGTCCCCCCTGCACCTTCTGGCCCTGCTTTGAGCTCTGC 432
                                                                                                                                                                                                                                                                                                                                                                                                            313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99
                                                                                                                                                                                                                                                                                                68
                                                                                                                                                                                                                                                                                                                                                                     70
                                                                                                                                                                                                                                                                                                                                                                                                                                               50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10 ProArgGlyCysIleValAlaValPheAlaIlePheCysIleSerArgLeuLeuCysSer 29
                                                                                                                                                                                                                                                                                                                                                                                                  TGTGGAGACAAGATCTACAACCCCTTGGAGCAGTGCTGTTACAATGACGCCATCGTGTCC
                                                                                                                                                                                                                                                                                                                                                                                                                       CysGlyAspLysPheTyrAspProLeuGlnHisCysCysTyrAspAspAlaValValPro 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HisGlyAlaProValAlaProMetThrProTyrLeuMetLeuCysGlnProHisLysArg 49
                                                                                                                                                                               AATTCCCAGTGCCACTCATCTCCCATCTCC
                                                                                                                                                                                                                AsnGlnAsnCysAspSerAlaArgThrSer 108
                                                                                                                                                                                                                                                   TGTCTTGATTCCTTTGGCCTCACAAACGATTTTGTTGTGAAGCTGAAGGTTCAGGGTGTG 492
                                                                                                                                                                                                                                                                                                                                                           LeuAlaArgThrGlnThrCysGly---AsnCysThrPheArgValCysPheGluGlnCys 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGGGAAGTC---ATCGCTCCCGCTGGCTCAGAACCATGGCTGTGCAGCCGGCACCC-AGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity:
                   EST
                                                                                 AI572169 275 bp mRNA linear te37e06.x1 Soares_NhHMPu_S1 Homo sapiens cDNA clone
                                  A1572169.1
                                                                 3', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Email: est@watson.wustl.edu
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
Seq primer: -28mil rev2 ET from Amersham
High quality sequence stop: 497.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note-"Organ: mixed (see below); Vector: pT7T3D-Pac (Pharmacia) with a modified polylinker; Site_1: Not I; Site_2: Eco RI; Equal amounts of plasmid DNA from three normalized libraries (melanocyte 2NbHM, pregnant uterus NbHPU, and fetal heart NbHH19W) were mixed, and ss circles were made in vitro: Following HAP purification, this DNA was used as tracer in a subtractive hybridization reaction. The driver was PCR-amplified cDNAs from pools of 5,000 clones made from the same 3 libraries. The pools consisted of I.M.A.G.E. clones 260232-265223, 340488-345479, and 484488-489479.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /tissue_type="Pooled human melanocyte, fetal heart,
pregnant uterus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /clone_lib="Soares_NhHMPu_S1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /clone="IMAGE:811883"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /db_xref="taxon;9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /organism="Homo sapiens"
/db_xref="GDB:6042794"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3.11e-09
183.50
52.73%
40.91%
27.47%
9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    lab_host="DH10B"
                                GI:4535543
                                                                                                                                                                                                                                                                                          ---ProTrpThrPheMetValLysLeu----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (1-523)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
Conservative:
Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels:
                                                                                                                                                                               522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     523
14523
1445
                                                                                   EST 13-APR-1999
IMAGE: 2088898
                                                                                                                                                                                                                                                                                        ---Ile 98
                                                                                                                                                                                                                                                                                                                                                                                                    372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     and
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                            δõ
                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JOURNAL COMMENT
                                                                                                  SOURCE
                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                     AA454642/c
                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-092-297-17 (1-117) x AI572169 (1-275)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                   KEYWORDS
                                                                                                                                      VERSION
                                                                                                                                                       ACCESSION
                                                                                                                                                                                                         Locus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BASE COUNT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                             135 TGGTGTCTGACACGAAGCCTGGGACATGTAGGCTCCCAAGTGGAC----
                                                                                                                                                                                                                                                                                                              19
                                                                                                                                                                                                                                                                                                                                                          41 LeuMetLeuCysGlnProHisLysArgCysGlyAspLysDheTyrAspProLeuGlnHis
                                                                                                                                                                                                                                                                                                                                                                                                                                                 21
                                                                                                                                                                                                                                                                                          CysCysTyrAsp-AspAlaValValProLeuAla 71
                                                                                                                                                                                                                                                                                                                                                                                                                                          PheCysIleSerArgLeuLeuCysSerHisGlyAlaProValAlaProMetThrProTyr 40
                                                                                                                                                                                                                                                                        TGTTGCTATGATAGATGCCGTCGTGCCCTTGGCC
                                                                                                                                                                                                                                                                                                                                          CTGATGCTGTGCCAGCCACACAAGAGATGTGGGGGACAAGTTCTACGACCCCCTGCAGCAC
Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostómi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
1 (bases 1 to 455)
Hillier,L., Allen,M., Bowles,L., Dubuque,T., Geisel,G., Jost,S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Email: cgapbs-r@mail.nih.gov
This clone is available royalty-free through LLNL; contact the
IMAGE Consortium (info@image.llnl.gov) for further information.
                                                                                                                                                                                   AA454642
zx99d06.sl Soares_NhHMPu_S1 F
                                                                                                                                   AA454642.1 GI:2177418
                                                                                                                                                       AA454642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished (1997)
                                                                                                 namur
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Insert Length: 585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tumor Gene Index
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  National Cancer Institute, Cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 (bases 1 to 275)
NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mammalia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota;
                                                                                                                                                               mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       primer: -40UP from Gibco
h quality sequence stop: 272.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note="Organ: mixed (see below); Vector: pT7T3D-Pac (Pharmacia) with a modified polylinker; Site_1: Not I; Site_1: Equal amounts of plasmid DNA from three normalized libraries (melanocyte 2NbHM, pregnant uterus NbHPU, and fetal heart NbHH19W) were mixed, and ss circles were made in vitro. Following HAP purification, this DNA was used as tracer in a subtractive hybridization reaction. The driver was PCR-amplified cDNAs from pools of 5,000 clones made from the same 3 libraries. The pools consisted of I.M.A.G.B. clones 260232-265223, 340488-345479, and 484488-489479.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            מ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /organism="Homo sapiens"
/db_xref="taxon:9606"
/clone="IMAGE:2088898"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    pregnant uterus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /tissue_type="Pooled human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone_lib="Soares_NhHMPu_S1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2.65e-09
180.50
76.92%
69.23%
27.02%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Std Error: 0.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
                                                                                                                                                                                   5 bp
Homo
                                                                                                                                                                                 sapiens
                                                                                                                                                                                                  mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    melanocyte,
                                                                                                                                                                                   CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 275
4
6
1
                                                                                                                                                                                 linear
DNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  fetal heart,
                                                                                                                                                                                 EST 06-JUN-1997
IMAGE:811883
                                                                                                                                                                                                                                                                                                                                                                         60
                                                                                                                                                                                                                                                                                                                                                                                                           179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    and
                                                                                                                                                                 밁
                                                                                                                                                                                              80
                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                     QΥ
                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                       Š
```

```
RESULT 14
AI275379/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BASE COUNT
ORIGIN
                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-092-297-17 (1-117) x AA454642 (1-455)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
Best Local Similarity:
        KEYWORDS
                                VERSION
                                                 ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                              275
                                                                                                                                                                                                                                                                              335
                                                                                                                                                                                                                                                                                                                                                                 395
                                                                                                                                                                                                                                                                                                                                                                                                                                          455 CAGCCGGCACCCAGGTGTGGAGACAAGATCTACAACCCCTTGGAGCAGTGCTGTTACAAT 396
                                                                                                                                                                                                                                                                                                      65 AspAlaValValProLeuAlaArgThrGlnThrCysGly---AsnCysThrPheArgVal 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  45 GlnProHisLysArgCysGlyAspLysPheTyrAspProLeuGlnHisCysCysTyrAsp 64
                                                                                                                                                                                                                                     86
3', mRNA sequence.
A1275379.1 GI....
EST.
                                                                                                                                                                                          AAGGTTCAGGGTGTGAATTCCCAGTGCCACTCATCTCCCATCTCC
                                                                                                                                                                                                                                                                                                                                                            GACGCCATCGTGTCCCTGAGCGAGACCCGCCAATGTGGTCCCCCCTGCACCTTCTGGCCC 336
                                                                                                                                                                                                                                                                          TGCTTTGAGCTCTGCTGTGTGATTCCTTTGGCCTCACAAACGATTTTGTTGTGAAGCTG
                                                                 A1275379
464 bp
ql63a07 x1 Soares_NhHMPu_S1 Homo
3',_mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Kucaba,T., Lacy,M., Le,N., Lennon,G., Marra,M., Martin,J., Mo,
Schellenberg,K., Steptoe,M., Tan,F., Theising,B., White,Y.,
,T., Waterston,R. and Wilson,R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Email: est@watson.wustl.edu
This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information. Seq primer: -4.ml3 fwd. ET from Amersham
High quality sequence stop: 426.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tel: 314 286 1800
Fax: 314 286 1810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Contact: Wilson RK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WashU-Merck EST Project 1997
Unpublished (1997)
                                                                                                                                                                                                                                 -----IleAsnGlnAsnCysAspSerAlaArgThrSer 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note="Organ: mixed (see below); Vector: pT7T3D-Pac (Pharmacia) with a modified polylinker; Site_1: Not I; Site_2: Eco RI; Equal amounts of plasmid DNA from three normalized libraries (melanocyte 2NbHM, pregnant uterus NbHPU, and fetal heart NbHH19W) were mixed, and ss circles were made in vitro. Following HAP purification, this DNA was used as tracer in a subtractive hybridization reaction. The driver was PCR-amplified cDNAs from pools of 5,000 clones made from the same 3 libraries. The pools consisted of I.M.A.G.E. clones 260232-265223, 340488-345479, and 484488-489479.*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /clone_lib="Soares_NhHMPu_S1"
/tissue_type="Pooled human me
pregnant uterus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="Homo sapiens"
/db_xref="GDB:6042794"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone="IMAGE:811883"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Cocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8.44e-09
178.50
60.00%
48.00%
26.72%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels:
                                                                                    sapiens
                                                                                                        mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      melanocyte, fetal heart,
                                                                                  linear
cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    455
36
19
11
                                                                                                                                                                                          231
                                                                                  EST 29-JAN-1999
IMAGE:1876980
                                                                                                                                                                                                                                                                                                                   97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Moore,B.
Y., Wylie
                                                                                                                                                                                                                                                                          276
```

```
В
                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BASE COUNT
ORIGIN
                                                                                                                밁
                                                                                                                                                 Š
                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
      DEFINITION
                                               AI081371/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-092-297-17 (1-117) x AI275379 (1-464)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
                                                                                                                228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                   462
                                                                                                                                                                                        282 CTGAAGGTTCAGGGTGTGAATTCCCAGTGCCACTCATCTCCCATCTCCAGTAAA-----
                                                                                                                                                                                                                                                                      342 CCCTGCTTTGAGCTCTGCTGTCTTGATTCCTTTGGCCTCACAAACGATTTTGTTGTGAAG
                                                                                                                                                   113 CysArgSer 115
                                                                                                                                                                                                                                       97
                                                                                                                                                                                                                                                                                                                 83 ValCysPheGluGlnCysCys-----
                                                                                                                                                                                                                                                                                                                                                                                  64 AspAspAlaValValProLeuAlaArgThrGlnThrCysGly---AsnCysThrPheArg 82 :::!|||||:::|| ||||||||
                                                                                                                                                                                                                                                                                                                                                                                                                                                              44 CysGlnProHisLysArgCysGlyAspLysPheTyrAspProLeuGlnHisCysCysTyr
                                                                                                            TGTGAAAGC 220
                                                                                                                                                                                                                  Leu------IleAsnGlnAsnCysAspSerAlaArgThrSerAspAspArgLeu 112
                                                                                                                                                                                                                                                                                                                                                        AATGACGCCATCGTGTCCCTGAGCGAGACCCGCCAATGTGGTCCCCCCCTGCACCTTCTGG 343
                                                                                                                                                                                                                                                                                                                                                                                                                                           TGCCAGCCGGCACNCAGGTGTGGAGACAAGATCTCACCCCCCTTGGAGCAGTGCTGTTAC
AIO81371 454 bp mRNA linear ox76g10.x1 Soares_NhHMPu_S1 Homo sapiens cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This clone is available royalty-free through LLNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information. Insert Length: 355 Std Error: 0.00 Seq primer: -400P from Gibco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished (1997)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       High quality sequence stop: 436.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tumor Gene Index
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 (bases 1 to 464)
NCI-GAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note-"Organ: mixed (see below); Vector: pf7f3D-Pac (Pharmacia) with a modified polylinker; Site_1: Not I; Site_2: Eco RI; Equal amounts of plasmid DNA from three normalized libraries (melanocyte 2NbHM, pregnant uterus NbHPU, and fetal heart NbHH19W) were mixed, and scircles were made in vitro. Following HAP purification, this DNA was used as tracer in a subtractive hybridization reaction. The driver was PCR-amplified cDNAs from pools of 5,000 clones made from the same 3 libraries. The pools consisted of I.M.A.G.B. clones. 260232-265223, 340488-34549, and 484488-489479.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         pregnant uterus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /clone_lib="Soares_NhHMPu_S1"
/tissue_type="Pooled human me!
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Homo sapiens"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /clone="IMAGE:1876980"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1.1e-08
177.50
55.42%
45.78%
26.57%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      lon/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative:
                                                                                                                                                                                                                                                                                                         ----ProTrpThrPheMetValLys 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        melanocyte, fetal heart,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    464
38
8
24
13
    EST 13-AUG-1998
IMAGE:1662306
                                                                                                                                                                                                                                                                                                                                                                                                                                        403
                                                                                                                                                                                                                                                                      283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and
```

Ş

Search completed: November Job time: 1693 secs

2002, 05:01:19

밁 ğ 밁 δõ

망 Ş

₽

```
BASE COUNT
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                     US-09-092-297-17 (1-117) x AIO81371 (1-454)
                                                                                                                                                                                                                                                                                                                                                                                                    Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                       Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                       331
    271
                                                                                                                                                               391 TCCCTGAGCGAGACCCGCCAATGTGGTCCCCCCTGCACCTTCTGGCCCTGCTTTGAGCTC
                                                                                                                                                                                                                                                        451
                                             98
                                                                                                                            88
                                                                                                                                                                                                                                                                       49 ArgCysGlyAspLysPheTyrAspProLeuGlnHisCysCysTyrAspAspAlaValVal
                                                                                                                                                                                         GTGAATTCCCAGTGCCACTCATCTCCCATCTCCAGTAAA---
                                     IleAsnGlnAsnCysAspSerAlaArgThrSerAspAspArgLeuCysArgSer 115
                                                                              TGCTGTCTTGATTCCTTTGGCCCTCACAAACGATTTTGTTGTGAAGCTGAAGGTTCAGGGT
                                                                                                                            CysCys---
                                                                                                                                                                                                                                                    AGGTGTGGAGACAAGATCTACAACCCCTTGGAGCAGTGCTGTTACAATGACGCCATCGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: cgapbs-remail.nih.gov

This clone is available royalty-free through LLNL; contact the

This chone for available royalty for further information.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Seq primer: -40m13 fwd. ET from Amersham
High quality sequence stop: 392.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 (bases 1 to 454)
NCI-GAP http://www.ncbi.nlm.nih.gov/ncicgap.
National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3', mRNA sequence, AIO81371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unpublished (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AI081371.1 GI:3418163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /lab.host="DHIUH"
/lab.host="DHIUH"
/note="Organ: mixed (see below); Vector: pT7T3D-Pac
/note="Organ: mixed (see below); Vector: pT7T3D-Pac
(Pharmacia) with a modified polylinker; Site_1: Not I;
Site_2: Eco RI; Equal amounts of plasmid DNA from three
normalized libraries (melanocyte 2NbHM, pregnant uterus
NbHPU, and fetal heart NbHH19W) were mixed, and ss circles
NbHPU, and fetal heart NbHH19W) were mixed, this DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    reaction. The driver was PCR-amplified cDNAs from pool: 5,000 clones made from the same 3 libraries. The pools consisted of I.M.A.G.E. clones 260232-265223, 340488-345479, and 484488-489479."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            were made in vitro. Following HAP purification, was used as tracer in a subtractive hybridizati
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eutheria;
1 to 454)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /clone_lib="Soares_NhHMPu_S1"
/tissue_type="Pooled human melanocyte, fetal heart, and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /db_xref="taxon:9606"
/clone="IMAGE:1662306"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      'organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                              5.62e-08
170.50
57.69%
46.15%
25.52%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          107 c
                                                                                                                       ----ProTrpThrPheMetValLysLeu-------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chordata; Craniata; Vertebrata; Euteleostomi; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                    Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          131 t
                                                                                                                                                                                                                                                                                                                                                                              454
36
9
20
13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              hybridization
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        from pools of
                                                                                                                                                                 332
                                                                                                                                                                                                        87
                                                                                                                       97
                                                                                                                                                                                                                                                  392
```

```
Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
o o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -C-/Cgn_1/USFTC.spool/US09092297/runat_29102002_093920_21691/app_query.fasta_1.263
-OB-Issued_Patents_NA -OFMT-fastap -SUFFIX=p2n.rni -MINMATCH=0.1 -LOOPCL=0
-LOOPEXT-0 -UNITS-bits -START-1 -END--1 -MARTX=blosum62 -TRANS-human40.cdi
-LIST-45 -DOCALIGN=200 -THR_SCORE-pct -THR_MAX-100 -THR_MIN=0 -ALIGN=15
-MODE-LOCAL -OUTFMY-pto -NORM-ext -HEAPSIZE-500 -MINLEN-0 -MAXLEN-200000000
-USER-US09092297_eCGN_1_1_13_@runat_29102002_093920_21691 -NCPU-6 -TCPU-3
-NO_XLPXY -NO_MMAP -LARGEQUERY -NE_SCORES=0 -WAIT -LONGLOG -DEV_TIMEOUT-120
-WARN_TIMEOUT-30 -THREADS-1 -XGAPO-10 -XGAPEXT=0.5 -FGAPOD=6 -FGAPEXT-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OM protein - nucleic search,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Command line parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        YGAPOP=10 -YGAPEXT=0.5 -DELOP=6 -DELEXT=7
                                                                                                                                                                                                                                                                                                                                                   Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 08
                                                                                                                                                                                                                                                           Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 seq
                                                                                                                                                                                                                                                         Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                 Issued_Patents_NA:*
1: /cgn2_6/ptodata/1/ina/5A_COMB.seq:*
2: /cgn2_6/ptodata/1/ina/5B_COMB.seq:*
3: /cgn2_6/ptodata/1/ina/6A_COMB.seq:*
4: /cgn2_6/ptodata/1/ina/6B_COMB.seq:*
5: /cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*
6: /cgn2_6/ptodata/1/ina/backfiles1.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      November 3, 2002, 01:14:46; Search time 46 Seconds (without alignments) 624.763 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Xgapop 10.0 , Xgapext
Ygapop 10.0 , Ygapext
Fgapop 6.0 , Fgapext
Delop 6.0 , Delext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-092-297-17
668
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   383533 seqs, 122816752 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 PLOPPRAMAPRGCIVAVFAI.....
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GenCore version Copyright (c) 1993 - 2002
                                                                                                                                                                                                                                                         Length DB
                                                        14044
14080
14083
14086
1194
                                                                                                                                                           14042
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         using
                                                                                                                                                                       US-08-424-424B-1
FCT-US94-05363A-1
US-09-103-840A-2
                               US-08-652-877-85
US-08-652-877-89
US-08-652-877-87
US-08-476-515A-83
US-08-447-702-4
US-08-465-615-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         frame_plus_p2n model
                                                                                                                                                                                                                                                                                                                    SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            . INQUCDSARTSDDRLCRSVS 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           767066
                                                                                                                                                                                                                                                     Description
                                                                                                                             Sequence
Sequence
                                                  Sequence
Sequence
                                                                                                                                                                                            Sequence 1,
                                                                                          Sequence
                                                                                                             Sequence
                                                                                                                                                                                                             Sequence 1,
                               sequence
                                                                                                                                                                       Sequence
                                                                                                      1, Appli
1, Appli
e 2, Appl
e 85, Appl
e 89, Appl
e 87, Appl
```

C	)		იი	0.0	იი
44.5	224	433336		32224 3224 3224 3224 3224 3224 3224 322	13 14
6 6 6 9 9 9	, 0 0 !	69.5 69.5 69.5	,,,,°	7700	73 <sub>.</sub>
10.3				100000000000000000000000000000000000000	00
N N U	32207	28 186	4722 1560 1560 6412	1254 1254 1265 1265 1265 1265 1267 1641 1641 1641 1641 1641 2147 2147 2147 2147 2147 2147 2147 21	.1 4.1
444	444	. w 4 w w	4644	בומשששבונטטנומון שמ	4 4
8-900-117A- 8-477-347-2 8-476-862-1	-09-230-371	-08-976-231-2 -08-905-223-2 -08-728-603-1 -09-149-934-2	08-979-608A 08-629-643A 09-155-884- 08-652-877-	-08-313-553-1 -09-767-993-1 -09-767-993-1 -09-030-607-17 -09-439-313-17 -08-385-229-3 -08-385-229-3 -08-650-000-1 95760-1 -08-513-553-1 95760-1 -08-310-537-3 -08-330-537-3 -08-330-537-3 -08-330-537-3 -08-357-251-15	08-485-3
H 20'2	20,	Sequence 1/, Appl Sequence 5, Appl Sequence 231, Appl Sequence 16, Appl Sequence 2, Appl	17,3,14	א תעתעתט ער 'עעט א "עט	- A-

## ALIGNMENTS

RESULT 1

```
US-08-424-424B-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 1, Application US/08424424B Patent No. 5759854
APPLICATION NUMBER: PCT/US94/05363
FILING DATE: MAX 25, 1996
ATTORNEY/AGENT INFORMATION:
NAME: MULLINS, J.G.
REGISTRATION NUMBER: 32,073
REFERENCE/DOCKET NUMBER: 32,5800-308
TELECOMMUNICATION INFORMATION:
TELEPHONE: 201-994-1700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                             SOFTWARE: WORD PERFECT 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/424.424B
FILING DATE: APRIL 21, 1995
                                                                                                                                                                          CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 INCH DISKETTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: LI, ET AL.
TITLE OF INVENTION: Neurotransmitter Transporter
NUMBER OF SEQUENCES: 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                            OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE: CARELLA, BYRNE, BAIN, GILFILLAN BODRESSEE: CECCHI, STEWART & OLSTEIN STREET: 6 BECKER FARM ROAD
                                                                                                                                                                                                                                                                                                                                                                                            07068
                                                                                                                                                                                                                                                                                                                                                                                                                               ROSELAND
NEW JERSEY
                                                                                                                                                                                                                                                                                                                                                                                                            USA
                                                                                                                                                                                                                                                                                                       MS-DOS
                                                325800-308
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                        PCT-US94-05363A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-092-297-17 (1-117) x US-08-424-424B-1 (1-2485)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-424-424B-1
                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 1, Application PC/TUS9405363A GENERAL INFORMATION:
                                                                            PRIOR APPLICATION DATA: APPLICATION NUMBER:
                                                                                                                                                   SOFTWARE: WORD PERFECT 5.1
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 INCH DISKETTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2009 GTGCTCACCA 2018
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1794
                                  ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: Neurotransmitter Transporter NUMBER OF SEQUENCES: 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1952 CGCCCCTACCGCTTCTATTTCTACATGTGGAAGTTCGTGTCTCCACTATGCATGG---CT 2008
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1844 TCAGCCA-----CGCTGCCACTCACTCTCATCGTCATCCTTGAGAACATCGCTGTGGCC 1897
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1739 CCCAAGGAGATGTTCACAGTGGGCTGCTGTGTCTTTACATTCCTCGTGGGACTGT----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY: L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE CHARACTERISTICS:
LENGTH: 2485 BASE PAIRS
                                                                                                                                                                                                                                                                                  CITY:
STATE:
NAME: FERRARO, GREGORY D. REGISTRATION NUMBER: 36,1 REFERENCE/DOCKET NUMBER:
                                                                                                                             FILING DATE:
                                                                                                                                                                                    COMPUTER: IBM PS,
OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 87 nCysCysPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         67 lValProLeuAlaArgThrGlnThrCysGlyAsnCysThrPheArgValCysPheGluGl 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           44
                                                                                                           CLASSIFICATION:
                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                                                STREET:
                                                                                                                                                                                                                                                                                                                              ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   u
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: NUCLEIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGGATTTATGGACCCAAGAAGTTCATGCAGGAGCTGACGGAGATGCTGG------GCTTC 1951
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sGlnProHisLysArgCysGlyAsp---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -LysPheTyrAspProLeuGlnHisCys----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rArgLeuLeuCysSerHisGlyAlaProValAlaProMetThrProTyrLeuMetLeuCy 44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ProArgAlaMetAlaProArgGlyCysIleValAlaValPheAlaIle-PheCysIleSe
                                                                                                                                                                                                                                                                                 ROSELAND
: NEW JERSEY
                                FERRARO,
                                                                                                                                                                                                                                                                                                                6 BECKER FARM ROAD
                                                                                                                                                                                                                                                                    USA
                                                                                                                                                                                                      IBM PS/2
                                                                                                                                                                                                                                                                                                                           CARELLA, BYRNE, CECCHI, STEWART
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LINEAR
                                                                                                                                                                                                                                                                                                                                                                                                           ET AL.
                                                                                                                        SUBMITTED HEREWITH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SINGLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6.99
78.50
35.58%
28.85%
11.75%
                                                                                                                                                                                      MS-DOS
                                                                                                                                      PCT/US94/05363A
325800-118
                                                                                                                                                                                                                                                                                                                                           BAIN, GILFILLAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -----CysTyrAspAspAlaVa 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       52
```

```
OTHER INFORMATION: CDC 1551; OTHER INFORMATION: "n" bases at various; OTHER INFORMATION: represent a, t, c or US-09-103-840A-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ρ
                                                                                                                                                              APPLICANT: FRASER, Claire M.
APPLICANT: VENTER, John C.
TITLE OF INVENTION: DNA SEQUENCES FOR STRAIN
TITLE OF INVENTION: TUBERCULOSIS
FILE REFERENCE: 24366-20007.00
CURRENT APPLICATION NUMBER: US/09/103,840A
CURRENT FILING DATE: 1998-06-24
NUMBER OF SEQ.ID NOS: 2
SOFTWARE: Patentin Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-103-840A-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-092-297-17 (1-117) x PCT-US94-05363A-1 (1-2486)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PCT-US94-05363A-1
                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
APPLICANT: FLEISCHMAN, Robert D.
APPLICANT: WHITE, Owen R.
                                                                                                                                                  SEQ ID NO 2
                                                                                                                                                                                                                                                                                                                                                                                               Sequence 2, Application US/09103840A Patent No. 6294328
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: 201-994-1744
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                        ORGANISM: Mycobacterium tuberculosis
                                                                                                               TYPE: DNA
                                                                          FEATURE:
                                                                                                                             LENGTH: 4403765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1953 CGCCCCTACCGCTTCTATTTCTACATGTGGAAGTTCGTGTCTCCACTATGCATGG---CT 2009
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1795
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2010 GTGCTCACCA 2019
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1899 TGGATTTATGGACCCAAGAAGTTCATGCAGGAGCTGACGGAGATGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1845 TCAGCCA-----CGCTGCCACTCACTCTCATCGTCATCCTTGAGAACATCGCTGTGGCC 1898
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1740 CCCAAGGAGATGTTCACAGTGGGCTGCTGTGTCTTTACATTCCTCGTGGGACTGT----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   No
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               67 lValProLeuAlaArgThrGlnThrCysGlyAsnCysThrPheArgValCysPheGluG1 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          44 sGlnProHisLysArgCysGlyAsp---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             24 rArgLeuLeuCysSerHisGlyAlaProValAlaProMetThrProTyrLeuMetLeuCy 44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5 ProArgAlaMetAlaProArgGlyCysIleValAlaValPheAlaIle-PheCysIleSe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: NUCLEIC ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             nCysCysPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -----TGTTCGTCCAGCGCTCCGGAAACTACTTTGTCACCATGTTCGATGACTAC 1844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2486 BASE PAIRS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LINEAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               201-994-1700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SINGLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6.99
78.50
35.58%
28.85%
11.75%
                                                                                                                                                                                                                                                                              FOR STRAIN ANALYSIS IN MYCOBACTERIUM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
               positions
                               throughout the sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       39
58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ----GCTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1952
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1794
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         24
```

Alignment Scores:

```
Db 4256986 CCGATCATGGCGGCGGGATCGCTGGCTCCCGGGTTGGTCGGGCTCCACACCCACACCCGG 4257045
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Db 4257130 TIGGTGTCCACACCGCCGAAITGCTGCATGCCCGCGCGATCGCACCGTTG 4257180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-092-297-17 (1-117) x US-09-103-840A-2 (1-4403765)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 85,
Patent No. 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4257046 GTGTTGTTTTGCGCCAGCAGGCTGGCATGCACCCACGGGTCG---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           08-652-877-85
     REFERENCE/DOCKET NUMBER: A1 TELECOMMUNICATION INFORMATION: TELEPHONE: 610-454-3816
                                                                                                                                                                                                                                                                                                                                                          ZIP: 19426-0107
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                     APPLICATION NUMBER: US 08/487,314
FILING DATE: 07-JUNE-1995
ATTORNEY/AGENT INFORMATION:
NAME: Savitzky, Martin
REGISTRATION NUMBER: 29,699
                                                                                                                                 APPLICATION NUMBER: US 08/344,836
FILING DATE: 23-NOV-1994
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                 OPERATING SYSTEM: Syst
SOFTWARE: Word 6.0 (Pa
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:
                                                                                                                                                                                APPLICATION NUMBER: PCT/US95/15203
FILING DATE: 22-NOV-1995
RIOR APPLICATION DATA:
                                                                                                                                                                                                                                                  FILING DATE:
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PPLICANT:
                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        39 ProTyrLeuMetLeuCysGlnProHisLys---ArgCysGlyAspLysPheTyrAspPro 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 ProLeuGinProProArgAlaMetAlaProArg-----GlyCysIleValAlaValPhe 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5, Application US/08652877
6187548
                                                                                                                                                                                                                                                                                                                                                                                                                                                ': 500 Arcola Rd:,
Collegeville
                                                                                                                                                                                                                                                                                                                                                                                                                USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Crumley, Gregg R.
Morse, Clarence C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Murray, Edward M.
Hjalm, Goran
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Rask, Lars
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Akerstrom, Goran
Juhlin, Claes
                                                                                                                                                                                                                                                                                                                                                Macintosh
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Rhone-Poulenc Rorer Inc
)0 Arcola Rd:, 3C43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3.77e+05
75.50
42.86%
29.87%
11.30%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human Calcium Sensor Protein, Fragments Thereof and DNA Encoding Same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -GlnHisCysCysTyrAspAspAlaValValProLeu 70
                                                                                                                                                                                                                                                                                                              System 7.5.1 (Patentin)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -TGCCACTTCCACCGACCCAGCTGTGGTGCTCCC---CACATTCCG 4257129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              106
                                                                                                                                                                                                                                                                                  US/08/652,877
                                                29,699
                                      A1355E-US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length: Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4403765
23
10
25
19
                                                                                                                                                                                                                                                                                                                                                                                                                        ğ
                                                                                                                                                                                                                                           US-08-652-877-89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ŋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; NAME/KEY:
; LOCATION:
US-08-652-877-85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9155
                                                                                                                                                              APPLICANT:
                                                                                               APPLICANT:
                                                                                                               APPLICANT:
                                                                                                                              APPLICANT:
                                                                                                                                              APPLICANT:
                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8
ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY:
```

```
US-09-092-297-17 (1-117) x US-08-652-877-85 (1-14042)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alignment Scores:
                                                                                                                                                                                                                                                                                                          Sequence 89, Application US/08652877 Patent No. 6187548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9314 GACAATGGGCGCTGCATCGAGATGATGAAACTCTGCAACCACCTAGATGACTGTTTGGAC 9373
                                                                                                                                                                                                                                                                                                                                                                                                          9374 AACAGCGATGAGAAAGGCTGT 9394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9254 GAGCTGATGCACCTGTGCCACACCCCCAGAACCCACGTGTCCACCTCACGAGTTCAAGTGT 9313
                                                             CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9113 AATGACTGTGGTGAC-----TATAGCGACGAGGGGGCTGCTTATAC------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9065 TGTGGTTACGGACTGTGTATC--
                                                                              TITLE OF INVENTION: Human Calcium Sensor Protein, TITLE OF INVENTION: Thereof and DNA Encoding Same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HYPOTHETICAL: NO
ANTI-SENSE: NO
ORIGINAL SOURCE:
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    48 LysArgCysGlyAspLysPheTyrAspProLeuGlnHisCysCysTyrAspAspAlaVal 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    28 CysSerHisGlyAlaProValAlaProMetThrProTyrLeuMetLeuCysGlnProHis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TISSUE TYPE: Placenta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LENGTH: 14042 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                ThrSerAspAspArgLeuCys 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGCATTAGTAAAACCTTC---GTCTGTGATGAGGATAATGACTGTGGAGACGGATCTGAT 9253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ValProLeuAlaArgThrGlnThrCys----------
                                                                                                                                                                                                                                                                                     INFORMATION:
SEE: Rhone-Poulenc Rorer Inc: 500 Arcola Rd., 3C43
Collegeville
                                                                                                                                       Crumley, Gregg R.
Morse, Clarence C.
Murray, Edward M.
Hjalm, Goran
                                                                                                                                                                                                                      Akerstrom, Goran
Juhlin, Claes
Rask, Lars
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CDS
68..14035
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ThrPheArgValCysPheGluGln--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30.71%
25.20%
11.08%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGACTTGCCAACAGAATCAGTTTACCTGTCAGAACGGGCGC 9196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MetValLysLeuIleAsnGlnAsnCysAspSerAlaArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -----CCAAAGATATTCAGGTGTGACCGGCAC 9112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -----CysCysProTrpThrPhe-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -GlyAsn 78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    9154
```

```
S
                                                                                                                                                                                                                                                                                                US-09-092-297-17 (1-117) x US-08-652-877-89 (1-14044)
                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; NAME/KEY:
; LOCATION:
US-08-652-877-89
                                                                                                                                                                                                                                                                                                                                                                                                                                  Alignment Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/344,836
FILING DATE: 23-NOV-1994
PRIOR APPLICATION DATA:
APPLICATION UNMBER: US 08/487,314
FILING DATE: 07-JUNE-1995
ATTORNEY/ACENT INFORMATION:
NAME: Savitzky, Martin
NAME: Savitzky, Martin
                                                                                                                                                                                                                                                                                                                                                                                                                   . No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: 610-454-3000
NFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
14044 base pai
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOLECULE TYPE:
HYPOTHETICAL: 1
ANTI-SENSE: 10
                                                                                                                                                                                                                                    9062 TGTGGTTACGGACTGTGTATC
                                                                                                      9152 ---
                                                                                                                                                                9110 AATGACTGTGGTGAC-----TATAGCGACGAGGGGGCTGCTTATAC------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGINAL SOURCE:
ORGANISM: Hom
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/
FILING DATE: 22-NOV-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE/DOCKET NUMBER: A1 TELECOMMUNICATION INFORMATION: 610-454-3816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                      79
                                                                                                                                68 ValProLeuAlaArgThrGlnThrCys----
                                                                                                                                                                                                                                                                     28
                                                                                                                                                                                                    48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM: Homo sapiens
TISSUE TYPE: Parathyroid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 14044 base pairs TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OPERATING SYSTEM: S
SOFTWARE: Word 6.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REGISTRATION NUMBER: 29,699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                        LysArgCysGlyAspLysPheTyrAspProLeuGlnHisCysCysTyrAspAspAlaVal 67
                                                                                                                                                                                                                                                                CysSerHisGlyAlaProValAlaProMetThrProTyrLeuMetLeuCysGlnProHis 47
                                TGCATTAGTAAAACCTTC---GTCTGTGATGAGGATAATGACTGTGGAGACGGATCTGAT 9250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19426-0107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PΑ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CDS
65..14032
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Macintosh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CDNA
                                                               -ThrPheArgValCysPheGluGln--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 single
                                                                                                                                                                                                                                                                                                                                                  74.00
30.71%
25.20%
11.08%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              System 7.5.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PCT/US95/15203
                                                                                                 CAGACTTGCCAACAGAATCAGTTTACCTGTCAGAACGGGCGC 9193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US/08/652,877
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (Patentin)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  89:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A1355E-US
                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                  Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                 Conservative:
                                                                                                                                                                                                                                 CCAAAGATATTCAGGTGTGACCGGCAC
-CysCysProTrpThrPhe-----
                                                                                                                                                                                                                                                                                                                                  8
8
8
                                                                                                                                                                                                                                                                                                                                                                                  14044
32
7
                                                                                                                                 -GlyAsn 78
                                                                                                                                                                9151
                                                                                                                                                                                                                                 9109
                                                                87
```

```
RESULT 6
US-08-652-877-87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
; NAME/KEY:
; LOCATION:
US-08-652-877-87
                                                                                                                                                                                                                                     TELEFAX: 610-454-3808 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                ORIGINAL SOURCE:
                                                                                                                 AOLECCE PARTICAL: PARTICE NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: WORD 6.0 (PACURENT APPLICATION DATA: APPLICATION NUMBER: US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 07-JUNE-199 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 22-NOV-PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION: 435 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9371 AACAGCGATGAGAAAGGCTGT 9391
                                                                                                                                                 MOLECULE TYPE:
                                                                                                                                                                                                                                                                                       TELECOMMUNICATION INFORMATION:
TELEPHONE: 610-454-3816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       9311 GACAATGGGCGCTGCATCGAGATGATGAAACTCTGCAACCACCTAGATGACTGTTTGGAC 9370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9251 GAGCTGATGCACCTGTGCCACACCCCAGAACCCACGTGTCCACCTCACGAGTTCAAGTGT 9310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: Human Calcium Sensor Protein, TITLE OF INVENTION: Thereof and DNA Encoding Same NUMBER OF SEQUENCES: 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      107 ThrSerAspAspArgLeuCys 113
                                                                TISSUE TYPE: Kidney
                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US 08/487,314 FILING DATE: 07-JUNE-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US 0: FILING DATE: 23-NOV-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: PCT/I
FILING DATE: 22-NOV-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: Macinte
OPERATING SYSTEM:
                                                                                                                                                                 TOPOLOGY:
                                                                                                                                                                                   STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                         REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                 REGISTRATION NUMBER: 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STATE: PA
                                                                                 ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE:
                                                                                                                                                                                                                     ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ŏ
                                                                                                                                                                                                   nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         19426-0107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Collegeville
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7, Application US/08652877 6187548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       500 Arcola Rd.,
                                                                                                                                                                                                                                                                          610-454-3808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Word 6.0 (Paten+1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Murray, Edward M.
Hjalm, Goran
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Crumley, Gregg R.
Morse, Clarence C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Akerstrom, Go
Juhlin, Claes
                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rask, Lars
                105..14072
                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Rhone-Poulenc Rorer Inc.
O Arcola Rd., 3C43
                                                                                                                                   No
                                                                                                                                                     CDNA
                                                                                                                                                                                   single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human Calcium Sensor Protein, Fragments
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PCT/US95/15203
                                                                                                                                                                                                                                                                                                                                                                                                                                                            US 08/344,836
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US/08/652,877
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Goran
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ---MetValLysLeuIleAsnGlnAsnCysAspSerAlaArg
                                                                                                                                                                                                                                                                                                                                         29,699
                                                                                                                                                                                                                                                       87:
                                                                                                                                                                                                                                                                                                                          A1355E-US
```

```
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-092-297-17 (1-117) x US-08-652-877-87 (1-14080)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 83,
Patent No. 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -08-476-515A-83
                                                                                                                                                 ZIP: 19426-0107
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                 COMPUTER: Compaq PC
OPERATING SYSTEM: Windows 95
SOFTWARE: WORD 7.0 (Patentin
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/470
FILING DATE: 07-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9351 GACAATGGGCGCTGCATCGAGATGAAGCTCTGCAACCACCTAGATGACTGTTTTGGAC 9410
                 CLASSIFICATION: 435
PRIOR. APPLICATION DATA:
                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES: (CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9411 AACAGCGATGAGAAAGGCTGT 9431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9291 GAGCTGATGCACCTGTGCCACACCCCAGAACCCACGTGTCCACCTCACGAGTTCAAGTGT 9350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9150 AATGACTGTGGTGAC-----TATAGCGACGAGAGGGGGCTGCTTATAC------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9102 TGTGGTTACGGACTGTGTATC------CCAAAGATATTCAGGTGTGACCGGCAC
                                                                                                                                                                                                                                                                                                                                                                                           PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                              PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        107
                                                                                                                                                                                                                                                        STREET:
                                                                                                                                                                                                                                                                                                                                                                             PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ð
 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          94
                                                                                                                                                                                                      COUNTRY:
                                                                                                                                                                                                                                                                                         ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            88 ----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       48 LysArgCysGlyAspLysPheTyrAspProLeuGlnH1sCysCysTyrAspAspAlaVal 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28 CysSerHisGlyAlaProValAlaProMetThrProTyrLeuMetLeuCysGlnProHis 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           68 ValProLeuAlaArgThrGlnThrCys-----
                                                                                                                                                                                                                                                                                                                                    LE OF INVENTION: Human Calcium Sensor Protein, Fragments OF INVENTION: Thereof and DNA Encoding Same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGCATTAGTAAAACCTTC---GTCTGTGATGAGGATAATGACTGTGGAGACGGATCTGAT 9290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ThrSerAspAspArgLeuCys 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INFORMATION:
                                                                                                                                                                                                                                    Collegeville
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3, Application US/08476515A 6239270
                                                                                                                                                                                                                        Αď
                                                                                                                                                                                                                                                                    Rhone-Poulenc Rorer Inc., 500 Arcola Rd
                                                                                                                                                                                                                                                                                                                                                                         Murray, Edwa:
Hjalm, Goran
                                                                                                                                                                                                          USA
                                                                                                                                                                                                                                                                                                                                                                                         Morse, Clarence C. Murray, Edward M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                Rask,
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Akerstrom, Goran
Juhlin, Claes
                                                                                                                                                                                                                                                                                                                                                                                                                             Crumley,
                                                                                                                                                                                                                                                                                           Martin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ----ThrPheArgValCysPheGluGln-----
                                               07-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                           Lars
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  271
74.00
30.71%
25.20%
11.08%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -----CAGACTTGCCAACAGAATCAGTTTACCTGTCAGAACGGGCGC 9233
                                                                                                                                                                                                                                                                                                                                                                                                                           Gregg R.
                                                                                                                                                                                                                                                                                        Savitzky
                                                               US/08/476,515A
US 08/344,836
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ---MetValLysLeuIleAsnGlnAsnCysAspSerAlaArg 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   --CysCysProTrpThrPhe----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8 58
8 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14080
32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -GlyAsn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         78
```

```
RESULT 8
US-08-652-877-83
                                                                                                                           밁
                                                                                                                                                        Š
                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                          δõ
                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                       ρ
                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-092-297-17 (1-117) x US-08-476-515A-83 (1-14083)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ocore
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-08-476-515A-83
                                              Sequence 83, Application US/08652877 Patent No. 6187548
GENERAL INFORMATION:
APPLICANT: Akerstrom, Goran
APPLICANT: Juhlin, Claes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INFORMATION FOR SEQ ID NO:
                                                                                                                         9413 AACAGCGATGAGAAAGGCTGT 9433
                                                                                                                                                                                9353 GACAATGGGCGCTGCATCGAGATGATGAAACTCTGCAACCACCTAGATGACTGTTTGGAC 9412
                                                                                                                                                                                                                                                   9293
                                                                                                                                                                                                                                                                                                                                                                          9194
                                                                                                                                                                                                                                                                                                               9236
                                                                                                                                                                                                                                                                                                                                                                                                                                9152 AATGACTGTGGTGAC----TATAGCGACGAGGGGGGCTGCTTATAC---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9104 TGTGGTTACGGACTGTGTATC------CCAAAGATATTCAGGTGTGACCGGCAC
                                                                                                                                                     107 ThrSerAspAspArgLeuCys 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ANTI-SENSE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 23-NOV-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: WO PCT/SE94/00483
FILING DATE: 24-MAY-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                     94
                                                                                                                                                                                                                                                                                                                                           79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                88
                                                                                                                                                                                                                                                                                                                                                                                                        83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       28 CysSerHisGlyAlaProValAlaProMetThrProTyrLeuMetLeuCysGlnProHis 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: Savitzky, Martin REGISTRATION NUMBER: 29, REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                     LysArgCysGlyAspLysPheTyrAspProLeuGlnHisCysCysTyrAspAspAlaVal 67
                                                                                                                                                                                                                                             GAGCTGATGCACCTGTGCCACACCCCAGAACCCACGTGTCCACCTCACGAGTTCAAGTGT 9352
                                                                                                                                                                                                                                                                                                        TGCATTAGTAAAACCTTC---GTCTGTGATGAGGATAATGACTGTGGAGACGGATCTGAT 9292
                                                                                                                                                                                                                                                                                                                                                                     ValProLeuAlaArgThrGlnThrCys-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        : 14083 base pairs nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        610-454-3808
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CDS
107..14071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     610-454-3816
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ĕ
                                                                                                                                                                                                                                                                           -----CysCysProTrpThrPhe----- 93
                                                                                                                                                                                                                                                                                                                                       --ThrPheArgValCysPheGluGln---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  24-MAY-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       74.00
30.71%
25.20%
11.08%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SE 9301764-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29,699
                                                                                                                                                                                                              -MetValLysLeuIleAsnGlnAsnCysAspSerAlaArg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        83:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A1355D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                  -GlyAsn 78
                                                                                                                                                                                                                                                                                                                                                                                                                                  9193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9151
                                                                                                                                                                                                                                                                                                                                        87
```

```
Š
                                                                               밁
                                                                                                                Ş
                                                                                                                                               US-09-092-297-17 (1-117) x US-08-652-877-83 (1-14086)
                                                                                                                                                                                                         Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                       ; NAME/KEY:
; LOCATION:
US-08-652-877-83
                                                                                                                                                                                                                                                                                   Pred. No.:
                                                                                                                                                                                                                                                                                                  Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Morse, Clarence C.
APPLICANT: Murray, Edward M.
APPLICANT: Hjalm, Goran
TITLE OF INVENTION: Human Calcium Sensor Protein, Fragments
TITLE OF INVENTION: Thereof and DNA Encoding Same
NUMBER OF SEQUENCES: 106
CORRESPONDENCE ADDRESS:
ADDRESSEE: Rhone-Poulenc Rorer Inc.
STREET: 500 Arcola Rd., 3C43
CITY: Collegeville
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELECOMMUNICATION INFORMATION:
TELEPHONE: 610-454-3816
TELEPAX: 610-454-3808
INFORMATION FOR SEQ ID NO: 83:
SEQUENCE CHARACTERISTICS:
LENGTH: 14086 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/US95/15203
FILING DATE: 22-NOV-1995
PRIOR APPLICATION DATA:
PRIOR APPLICATION DATA:
ONLY TOATTON NUMBER: US 08/344,836
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US 08/344,836
ETILING DATE: 23-NOV-1994
PRIOR APPLICATION DATA:
APPLICATION UMBER: US 08/487,314
FILING DATE: 07-JUNE-1995
ATTORNEY,AGENT INFORMATION:
NAME: Savitzky, Martin
REGISTRATION NUMBER: 29,699
REFERENCE/DOCKET NUMBER: A1355E-US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: MacIntosh
OPERATING SYSTEM: System
SOFTWARE: Word 6.0 (Pate
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/O
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY: linear MOLECULE TYPE: CDN
9152 AATGACTGTGGTGAC-----TATAGCGACGAGGGGGCTGCTTATAC------ 9193
                                                                       9104 TGTGGTTACGGACTGTGTATC------CCAAAGATATTCAGGTGTGACCGGCAC 9151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                    ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                    HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                           48 LysArgCysGlyAspLysPheTyrAspProLeuGlnHisCysCysTyrAspAspAlaVal 67
                                                                                                28 CysSerHisGlyAlaProValAlaProMetThrProTyrLeuMetLeuCysGlnProHis 47
                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRANDEDNESS: single TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY: USA
ZIP: 19426-0107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                : Crumley, Gregg R.
: Morse, Clarence C.
: Murray, Edward M.
: Hjalm, Goran
                                                                                                                                                                                                                                                                                                                                                            CDS
107..14074
                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Rask, Lars
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CDNA
                                                                                                                                                                                                       74.00
30.718
25.208
11.088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               System 7.5.1 0 (Patentin)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US/08/652,877
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A1355E-US
                                                                                                                                                                                                     Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                            14086
32
7
```

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-092-297-17 (1-117) x US-08-447-702-4 (1-1194)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; NAME/KEY:
; LOCATION:
US-08-447-702-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08,
FILING DATE: 10-FEB-1994
APPLICATION NUMBER: FR 920
FILING DATE: 10-AUG-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     08-465-615-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IEM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                               TITLE OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ent No.
                                                                                                                        SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     722
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    560 TGGGGGACTCCAGTGCTGGGAACATGCTCTCCCATTAAACATTGCGGCGATGGGCTCATT 619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               No . .
                                                                                                                                                                                                                                                                               STREET:
                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                  CITY: Alexandria
                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             56
                                                                                                                                                                                                                                                                                                   ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              95 lLysLeuIleAsnGln 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 36 ProMetThrProTyrLeuMetLeuCysGlnProHisLysArgCysGlyAspLysPheTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   22 CysIleSerArgLeuLeuCysSerHisGlyAlaProVal---
                                                                                                                                                                                                                                                                                                                                                E OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGTATGGGGAGATGGGAAGCATGGCTCCCGTATTTAAAACAGAGTATGGGAATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ----GCCGCAGTATCATCCAGAGTATCATCCAGCGTCTGTGCGTCTACTAATGCGATGCA 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rCysGlyAsnCysThrPheArgValCysPheGluGlnCysCysProTrpThrPheMetVa 95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AspProLeuGlnHisCysCysTyr-AspAspAlaValValProLeuAlaArgThrGlnTh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCAGATCATTAGTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAACGAACAGGTACATGTTGCTTCCTGGCCAGCCTTCGTCCCTAAA----
                                                                                                                                                                                                                      22313-1404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Application US/08465615 5635391
                                                                                                                                                                                                                                                                                                                                                                               INVENTION:
                                                                                                                                                                                                                                                     Virginia
                                                                                                                                                                                                                                                                               E: Burns, Doa
P.O. Box 1404
                                                                                                                                                                                                                                   United States
                                                                                                                                                                                                                                                                                                                                                                                                                                   CERBELEAUD, Edith
LEVY-SCHIL, Sophie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDS
87..1148
 10-AUG-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Dominique
EAUD, Edith
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11.6
73.00
40.70%
29.07%
10.93%
                                                                                                                                                                                                                                                                                                                                     POLYPEPTIDES POSSESSING A NITRILASE ACTIVITY, DNA SEQUENCE CODING FOR SAID POLYPEPTIDES, EXPRESSION CASSETTES AND HOST MICROORGANISMS ENABLING TO BE OBTAINED, AND METHOD OF CONVERTING NITRILES TO CARBOXYLATES BY MEANS OF SAID POLYPEPTIDE
                                                                                                                                                                                                                                                                                               Doane,
                                                                                                                                                                                                                                                                                                                                                                                                                           Joel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  737
                FR 9209882
                                           US 08/194,588
                                                                                                         US/08/465,615
                                                                                                                                                                                                                                                                                              Swecker & Mathis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1194
25
10
38
13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ---Ala
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         665
                                                                                                                                                                                                                                                                                                                                                                         NG THEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score
```

```
US-08-485-355B-39/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-092-297-17 (1-117) x US-08-465-615-4 (1-1194)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-08-465-615-4
                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 39, Application US/08485355B
PATENT NO. 6177075
PATENT INFORMATION:
APPLICANT: Christian, P. D., Gordon, K. H.J., Hanz
TITLE OF INVENTION: Insect Viruses and Their Uses
Protecting Plants
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEFAX: (703) 836-20 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOLECULE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELECOMMUNICATION INFORMATION: TELEPHONE: (703) 836-6620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            No.:
                                      COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Ver:
CURRENT APPLICATION DATA:
APPLICATION UMBER: US/08/485,355B
FILING DATE: 07-Jun-1995
CLASSIFICATION: CUnknown>
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                722 TCAGATCATTAGTCAG 737
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          666 ----GCCCCAGTATCATCCAGAGTATCATCCAGCGTCTGTGCGTCTACTAATGCGATGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          620 GAACGAACAGGTACATGTTGCTTCCTGGCCAGCCTTCGTCCCTAAA---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      560 TGGGGGACTCCAGTGCTGGGAACATGCTCTCCCATTAAACATTGCGGCGATGGGCTCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     500 TGTATGGGGAGATGGGATGGAAGCATGGCTCCCGTATTTAAAACAGAGTATGGGAATCT 559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    95 lLysLeuIleAsnGln 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          36 ProMetThrProTyrLeuMetLeuCysGlnProHisLysArgCysGlyAspLysPheTyr 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               22 CysIleSerArgLeuLeuCysSerHisGlyAlaProVal----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REGISTRATION NUMBER: 36, REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ENGTH:
                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                   CORRESPONDENCE ADDRESS:
ADDRESSEE: Flehr Hohbach Test Albritton & Herbert STREET: Four Embarcadero Center, Suite 3400
                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              rCysGlyAsnCysThrPheArgValCysPheGluGlnCysCysProTrpThrPheMetVa 95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AspProLeuGlnHisCysCysTyr-AspAspAlaValValProLeuAlaArgThrGlnTh 75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       nucleic acid
APPLICATION NUMBER: US 08/440,522 FILING DATE: 12-MAY-1995
                                                                                                                                                                                                                                             COUNTRY: United States ZIP: 94111-4187
                                                                                                                                                                                                                                                                                       STATE: California
                                                                                                                                                                                                                                                                                                      CITY: San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  836-2021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11.6
73.00
40.70%
29.07%
10.93%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                36,113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             003025-015
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative:
                                                                                                                                         Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1194
25
10
38
13
                                                                                                                                                                                                                                                                                                                                                                                                                                                Hanzlik,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               --Ala 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      619
```

APPLICATION NUMBER: US 08/089,372

ATTORNEY/AGENT INFORMATION:

```
US-09-092-297-17 (1-117) x US-08-485-355B-39 (1-5312)
                                                       Sequence 41, Application US/08485355B
Patent No. 6177075
GENERAL INFORMATION:
APPLICANT: Christian, P. D., Gordon, K. H.J., Hanz
TITLE OF INVENTION: Insect Viruses and Their Uses
NUMBER OF SEQUENCES: 57
                                                                                                                                                                                                                                                                                                                                                                                                                                2504 GCTGTGGAGCCGTTGTAATGCAGAATGACAGACGCAAAAGTGCGTCCCTGCGCTTCGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2624 TTCGCGCTATGGTTGAGTTGTCTCTCAATGTCACCTGTCGGGTCGCGGATGTACAGGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2684 TCACTCGGTTTGACAGTCGTGATCTCCAGGGGTGCAGGGATGTCTGTAAACACCTCGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2564 TTGGTGTGGCGCGTGATGCCGACTAGAAGGTGCGACTTCTCAGCGAGGAGCTTCTGCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5 ProArgAlaMetAlaProArgGlyCysIleValAlaValPheAlaIlePheCysIleSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 781-1989
TELEFAX: (415) 398-3249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AlaValValProLeu------------------AlaArgThrGlnThrCysGlyAsnCys 79
                                                                                                                                                                                                                                                                                                                                                  ACAGTCATCGCGCCCTCAGCCCCGTGGCGCGACTTTTCCTCCTGCGTGAAGCAGAGCGTT 2385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCGTGCGGCGTGGCACTCTGCGGGGGGTATCGTTGCCATCACTTCGTTGCGCTGCACCTCT 2685
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME: Trecartin, Richard F.
REGISTRATION NUMBER: 31,801
REFERENCE/DOCKET NUMBER: A-58631-2/RFT/DSS
      ADDRESSEE: Flehr Hohbach Test Albritton & Herbert LLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 08-JUL-1993
APPLICATION NUMBER: AU PL4081/92
FILING DATE: 14-AUG-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CDS: 37..5148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ---LeuCysSerH1sGlyAlaProValAlaProMetThrProTyr 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -ProLeuGlnHisCysCysTyrAsp-----Asp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -CysGlnProHisLysArgCysGlyAspLysPheTyrAsp---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    39:
                                                                                                                                                                                                                                                                                                                                                                                          PheArgValCysPheGluGln---Cys
                                                                                                                Hanzlik, T.
                                                                                                                                                                                                                                                                                                                                                                                                                                  2445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2625
                                                                                                                                                                                                                                                                                                                                                                                          88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  56
                                              밁
                                                                                    QΥ
                                                                                                                                                                        ğ
                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                              δõ
                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-092-297-17 (1-117) x US-08-485-355B-41 (1-5312)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-08-485-355B-41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEX: 910 277299
INFORMATION FOR SEQ ID NO: 41:
                                       2504 GCTGTGGAGCCGTTGTAATGCAGAATGACAGACGCAAAAGTGCGTCCCTGCGCTTCGTGC
                                                                                                                            2564 TIGGIGIGGCGCGIGAIGCCGACIAGAAGGIGCGACIICTCAGCGAGGAGCIICTGCICI 2505
                                                                                                                                                                                                             2624 TICGCGCTATGGTTGAGTTGTCTCTCAATGTCACCTGTCGGGTCGCGGATGTACAGGTGG 2565
                                                                                                                                                                                                                                                                                                                                                                                 2744 CCGTGCGGCGCACTCTGCGGGGGTATCGTTGCCATCACTTCGTTGCGCTGCACCTCT
                                                                                                                                                                                                                                                                                                  2684 TCACTCGGTTTGACAGTCGTGATCTCCAGGGGTGCAGGGATGTCTGTAAACACCTCGGCT 2625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          No . :
                                                                                                                                                                          57
    80 Thr-
                                                                                        66 AlaValValProLeu-----
                                                                                                                                                                                                                                                   41 LeuMetLeu-----CysGlnProHisLysArgCysGlyAspLysPheTyrAsp---
                                                                                                                                                                                                                                                                                                                                            25 ArgLeu---
                                                                                                                                                                                                                                                                                                                                                                                                                       5 ProArgAlaMetAlaProArgGlyCysIleValAlaValPheAlaIlePheCysIleSer 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY: CDS
LOCATION: 4218..4514
SEQUENCE DESCRIPTION: SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEPHONE: (415) 781-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US 08/089,372
FILING DATE: 08-JUL-1993
APPLICATION NUMBER: AU PL4081/92
FILING DATE: 14-AUG-1992
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 08/440,522
FILING DATE: 12-MAY-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA: US/08/485,355B FILING DATE: 07-Jun-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REGISTRATION NUMBER: 31,801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY: United States ZIP: 94111-4187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STREET: Four Embarcadero Center, Suite 3400 CITY: San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: nucleic acid
STRANDEDNESS: unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REGISTRATION NUMBER: 31,801
REFERENCE/DOCKET NUMBER: A-58631-2/RFT/DSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 5312 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (4.15)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 92.2
73.00
37.40%
26.02%
10.93%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    unknown
                                                                                                                                                                 -ProLeuGlnHisCysCysTyrAsp----
                                                                                                                                                                                                                                                                                                                                          -LeuCysSerHisGlyAlaProValAlaProMetThrProTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    398-3249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NO:
                                                                                 ----AlaArgThrGlnThrCysGlyAsnCys 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
--PheArgValCysPheGluGln---Cys 88
                                          2445
                                                                                                                                                                                                                                                          56
                                                                                                                                                                                                                                                                                                                                          40
                                                                                                                                                                      65
                                                                                                                                                                                                                                                                                                                                                                                    2685
```

Ş

80

Thr -----

2444

В

99

밁 Ş 밁 Ş 밁 Ş

41 LeuMetLeu---

57

Percent Similarity: Best Local Similarity:

92.2 73.00 37.40% 26.02% 10.93%

; SEQUENCE DESCRIPTION: US-08-485-3558-39

FEATURE: MOLECULE TYPE:

DNA

unknown

NAME/KEY:

INFORMATION FOR SEQ ID NO: 39:
SEQUENCE CHARACTERISTICS:
LENGTH: 5312 base pairs

TELEX: 910 277299

TYPE: nucleic acid STRANDEDNESS: unknown

Alignment Scores:

Хо . .

Query Match:

2744

25 ArgLeu-----

US-08-485-355B-41/c

NUMBER OF SEQUENCES: CORRESPONDENCE ADDRES

2384

TGCGCCTGG 2376 CysProTrp 91

89

В Q.

맑

Ş 밁 ρy 밁 Ş

밁

```
RESULT 13
US-08-485-355B-43/c
Sequence 43, Application US/08485355B
PALENT NO. 6177075
GENERAL INFORMATION:
CHRISTIAN, P. D., Gordon, K. H.J.,
APPLICANT: Christian, P. D., Gordon, K. H.J.,
Insect Viruses and Their
                                         Ş
                                                                                                                                                                                                                                                            SEQUENCE DESCRIPTION: SEQ ID NO: 43: US-08-485-3558-43
                                                                        US-09-092-297-17 (1-117) x US-08-485-355B-43 (1-5312)
                                                                                                                                     Query Match
                                                                                                                                                    Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                 Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION FOR SEQ ID NO: 43: SEQUENCE CHARACTERISTICS:
2744 CCGTGCGGCGTGGCACTCTGCGGGGGTATCGTTGCCATCACTTCGTTGCGCTGCACCTCT 2685
                                                                                                                                                                                                               ŏ
..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2384 TGCGCCTGG 2376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2444
                                           ა
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US 08/089,372
FILING DATE: 08-JUL-1993
APPLICATION NUMBER: AU PL4081/92
FILING DATE: 14-AUG-1992
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEPHONE: (415) 781-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
                                   ProArgAlaMetAlaProArgGlyCysIleValAlaValPheAlaIlePheCysIleSer 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CysProTrp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACAGTCATCGCGCCCTCAGCCCCGTGGCGCGACTTTTCCTCCTGCGTGAAGCAGAGCGTT 2385
                                                                                                                                                                                                                                                                                                           NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: nucleic acid
STRANDEDNESS: unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION: CLASSIFICATION: CLASSIFICATION: 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US 08/440,522 FILING DATE: 12-MAY-1995
                                                                                                                                                                                                                                                                                                                                                                                     POPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEX: 910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REGISTRATION NUMBER: 31,801
REFERENCE/DOCKET NUMBER: A-58631-2/RFT/DSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Trecartin, Richard F. REGISTRATION NUMBER: 31,801
                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 5312 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/08/485,355B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY: United States
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE: Flehr Hohbach
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ITY: San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SE: Flehr Hohbach Test Albritton & Herbert LLP Four Embarcadero Center, Suite 3400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (415)
                                                                                                                                   37.40%
26.02%
10.93%
                                                                                                                                                                                           92.2
73.00
                                                                                                                                                                                                                                                                                                                                                                                   unknown
                                                                                                                                                                                                                                                                                                           CDS
4518.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   398-3249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <Unknown>
                                                                                                                                                                                      Length:
Matches:
                                                                                                               Gaps:
                                                                                                                                 Mismatches:
Indels:
                                                                                                                                                                      Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hanzlik,
Uses in
```

```
US-08-485-355B-45/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 45, Application US/08485355B
Patent No. 6177075
GENERAL INFORMATION:
APPLICANT: Christian, P. D., Gordon, K. H.J.,
TITLE OF INVENTION: Insect Viruses and Their t
                                                                                          TELEX: 910 277299
INFORMATION FOR SEQ ID NO: 45:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2384 TGCGCCTGG 2376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2564 TIGGTGTGGCGCGTGATGCCGACTAGAAGGTGCGACTTCTCAGCGAGGAGCTTCTGCTCT 2505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2444 ACAGTCATCGCGCCCTCAGCCCCGTGGCGCGACTTTTCCTCCTGCGTGAAGCAGAGCGTT 2385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2504 GCTGTGGAGCCGTTGTAATGCAGAATGACAGACGCAAAAGTGCGTCCCTGCGCTTCGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2684 TCACTCGGTTTGACAGTCGTGATCTCCAGGGGTGCAGGGATGTCTGTAAACACCTCGGCT 2625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          41 LeuMetLeu------CysGlnProHisLysArgCysGlyAspLysPheTyrAsp---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           66 AlavalValProLeu------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25 ArgLeu-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/485,355B
FILING DATE: 07-Jun-1995
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                               TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
ADDRESSEE: Flehr Hohbach
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTCGCGCTATGGTTGAGTTGTCTCTCAATGTCACCTGTCGGGTCGCGGATGTACAGGTGG 2565
                                                                                                                                                                                                                                                                                                                                     OR APPLICATION DATA:
APPLICATION UMBER: US 08/440,522
FILING DATE: 12-MAY-1995
APPLICATION NUMBER: US 08/089,372
APPLICATION UMBER: US 08/089,372
FILING DATE: 08-UUL-1993
APPLICATION NUMBER: AU PL4081/92
FILING DATE: 14-AUG-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
  TOPOLOGY:
                                               TYPE: nucleic acid
                      STRANDEDNESS: unknown
                                                                                                                                                                                                                                                          NAME: Trecartin, Rich
REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY: United States ZIP: 94111-4187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STATE: California
                                                                                                                                                                                                                                        REFERENCE/DOCKET NUMBER: A-58631-2/RFT/DSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CITY: San Francisco
                                                                   LENGTH: 5368 base pairs
                                                                                                                                                                     TELEFAX:
                                                                                                                                                                                         TELEPHONE: (415)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EE: Flehr Hohbach Test Albritton & Herbert LLF Four Embarcadero Center, Suite 3400
                                                                                                                                                                     (415)
unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ----LeuCysSerHisGlyAlaProValAlaProMetThrProTyr 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -ProLeuGlnHisCysCysTyrAsp---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Protecting Plants
                                                                                                                                                                     398-3249
                                                                                                                                                                                                                                                                                     Richard F.
                                                                                                                                                                                                                                                                 31,801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ---PheargValCysPheGluGln---Cys 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ---AlaArgThrGlnThrCysGlyAsnCys 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Uses
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hanzlik, T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -----Asp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  56
```

```
RESULT 15
US-08-313-553-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-092-297-17 (1-117) x US-08-485-355B-45 (1-5368)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; HAMB/KEY: CDS LOCATION: 4944. SEQUENCE DESCRIPTION: US-08-485-355B-45
                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 1, Application US/08313553 Patent No. 5641650
                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
APPLICANT: TURNER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2384
                                             CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                          MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
ADDRESSEE: Walter H. Dreger
STREET: 4 Embarcadero Center,
CITY: San grancisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2624
                                                                                                             SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                        APPLICANT: BETLACH, Mary C.
PITLE OF INVENTION: EXPRESSION OF HETEROLOGOUS POLYPEPTIDES
FITLE OF INVENTION: IN HALOBACTERIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2684 TCACTCGGTTTGACAGTCGTGATCTCCAGGGGTGCAGGGATGTCTGTAAACACCTCGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2744 CCGTGCGGCGTGGCACTCTGCGGGGGTATCGTTGCCATCACTTCGTTGCGCTGCACCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Х
О
..
                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2564 TIGGIGIGGCGCGIGAIGCCGACIAGAAGGIGCGACIICICAGCGAGGAGCIICIGCICI 2505
TTORNEY/AGENT INFORMATION:
                                                                                                                                        MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                FILING DATE:
                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                               COUNTRY: U
                                                                                                                                                                                                                                                STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   41
                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        89 CysProTrp 91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5 ProArgAlaMetAlaProArgGlyCysIleValAlaValPheAlaIlePheCysIleSer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACAGTCATCGCGCCCTCAGCCCCGTGGCGCGACTTTTCCTCCTGCGTGAAGCAGAGCGTT 2385
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCTGTGGAGCCGTTGTAATGCAGAATGACAGACGCAAAAGTGCGTCCCTGCGCTTCGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGCGCCTGG 2376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Thr -----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTCGCGCTATGGTTGAGTTGTCTCTCAATGTCACCTGTCGGGTCGCGGATGTACAGGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LeuMetLeu - - -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ArgLeu------LeuCysSerHisGlyAlaProValAlaProMetThrProTyr 40
                                                                                                                                                                                                                                           California
                                                                                                                                                                                                                              USA
                                                                                                                                                                                                                                                                                                                                                                     TURNER, GO
BETLACH, I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           93.5
73.00
37.40%
26.02%
10.93%
                                                                                                                                                                                                                                                                                                                                                                                     George J.
                                US/08/038,662
                                                                                              US/08/313,553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -CysGlnProHisLysArgCysGlyAspLysPheTyrAsp---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ProLeuGlnHisCysCysTyrAsp----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .5162
SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ħ
                                                                                                                                                                                                                                                                           Suite 3400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches:
Indels;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative:
                                                                                                                            Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             45:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -PheArgValCysPheGluGln---Cys
                                                                                                                              #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ----Asp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              56
```

```
B
    밁
                                                                                       Ş
                                                                                                                     밁
                                                                                                                                              20
                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                               Š
                                                                                                                                                                             밁
                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                           US-09-092-297-17 (1-117) x US-08-313-553-1 (1-1254)
                                                                                                                                                                                                                                                                                                                                         Query Match:
                                                                                                                                                                                                                                                                                                                                                     Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-313-553-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: (415) 398-3249 INFORMATION FOR SEQ ID NO: 1
    1013
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OTHER INFORMATION: FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELECOMMUNICATION INFORMATION: TELEPHONE: (415) 781-1989
                                                                                                                                                                                                                                                                                                                                                                                                     νο
:
                                                                                                                     917
                                                                                                                                                                                872
                                                                                                                                                                                                                                    836 GCACCGCAGCGATGC-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY:
LOCATION:
                                                                                                                                         49 ArgCysGlyAspLysPheTyrAspProLeuGlnHisCysCysTyrAspAspAlaValVal 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY: misc_feature LOCATION: 9..414 OTHER INFORMATION: /not OTHER INFORMATION: trar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY: misc_feature LOCATION: 376..414 OTHER INFORMATION: /no
                                                                                                                                                                                                                                                                                                                                                                                                                                                             OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                            9 AlaProArgGlyCysIleValAlaValPheAlaIlePheCysIleSerArgLeuLeuCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: misc_signal 
LOCATION: 374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME: Dreger, Walte
REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ENGTH:
                           PheArgValCysPheGluGlnCysCysProTrp 91
                                                                                                                  SerHisGlyAlaProValAlaProMetThrProTyrLeuMetLeuCysGlnProHisLys
                                                                                     ProLeuAlaArgThrGlnThrCysGly----
CGCTGAACATCGAGACGCTGCTGTTCATGG 1042
                                                       ----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1254 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          misc_feature
1245..1250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDS
376..1161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          linear
:: DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   , Walter H.
                                                                                                                                                                                                                                                                                                                                      21.6
71.00
32.97%
26.37%
10.63%
                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note= "Bacteriorhodopsin
transcriptional and translational regulatory
sequences are located in this region."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note= "Bacteriorhodopsin pre-sequence."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>..</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A-57669/WHD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "RNA start site.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "BamHI site."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "PstI site."
                                                                                                                                                                                                                                                                                                                                                                   Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                       Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                        Gaps:
                                                                                                                                                                                                                                    -----TGTACATCCTGTACGTGCTGT
                                                                                                                                                                          TGCGCCCCGAGGTCG
                                                                                     AsnCysThr 80
                                                                                                                                                                                                       48
                                                                                                                                                                          916
                                                                                                                                                                                                                                    871
```

Search completed: November

ω

2002,

03:21:15

Job time : 897 secs

us-09-092-297-17.p2n.rni

THIS PAGE BLANK (USPTO)

```
Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MODEL=frame+_p2n.model -DEV=xlh

O-/cgn2_1/USPTO_spool/US09092297/runat_29102002_094016_22405/app_query.fasta_1.263

OD=/cgn2_1/USPTO_spool/US09092297/runat_29102002_094016_22405/app_query.fasta_1.263

OD=/cgn2_1/USPTO_spool/US09092297/runat_29102002_094016_22405-app_query.fasta_1.263

OD=/cgn2_1/USPTO_spool/US09092297-fastap -SUFFIX=01190 -TRANS-human40.cd1

-LIST=45 -DOCALIGN=200 -TRL_SCORE=-quality -THR_MIN=1 -ALIGN=15 -MODE=LOCAL

-OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=200000000

-OUTFMT=pto -NORM=ext -HEAPSIZE=500 -MINLEN=0 -MAXLEN=200000000

-OUTFMT=US09092297_eCGN 1_1_0_erunat_29102002_094016_22405 -NCPU=6 -ICPU=3

-NO_XLPXY -NO_MMAP -LARGEQUERY -NEG_SCORES=0 -WAIT -LONGLOG -DEV_TIMEOUT=120

-WARN_TIMEOUT=30 -THREADS=1 -XGAPOP=60 -XGAPEXT=60 -FGAPOP=6 -FGAPEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Post-processing: Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Word size:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OM protein - nucleic search, using frame_plus_p2n model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Command line parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Run on:
Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Xgapop 60.0
Ygapop 60.0
Fgapop 6.0
Delop 6.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N_Geneseq_032802:*
1: /SIDS1/qcqdata
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OLIGO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 PLOPPRAMAPRGCIVAVEAI....
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           November 3, 2002, 03:14:04; Search time 210 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1736436 segs, 858457221 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-092-297-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GenCore version 5.1.3
Copyright (c) 1993 - 2002 Compugen Ltd.
                                                                                                                                  /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2001A.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2001B.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2002.DAT:*
                                                                                                                                                                                                                                                                         /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1995.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1995.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1997.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1998.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1999.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                   \SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1991.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1992.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1993.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1994.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1995.DAT:*
                                                                                                                                                                                                                                                   /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA2000.DAT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1989.DAT:*
/SIDS1/gcgdata/geneseq/geneseqn-emb1/NA1990.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ./gcgdata/geneseq/geneseqn-embl/NA1980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /gcgdata/geneseq/geneseqn-emb]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /gcgdata/geneseq/geneseqn-emb]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     - -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Xgapext 60.0
Ygapext 60.0
Fgapext 7.0
Delext 7.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .....INQNCDSARTSDDRLCRSVS 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (without alignments)
956.567 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3471288
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /NA1988.DAT:*
```

45	C 44	c 43	42	4	c 40	39	38	37	u o	u N U		2 6			, ,	2 2 2	3 6	2 2	26		24	23	2 2 2	. 21	20	19	18	17	16	15	14	13	12	11	10	o o	۰ \	ıσ	۰ ۵	1 4	· w	N	1	No.	
7	7	7	7	7	7	7	7	7		۰ ۱	O	οα	οα	οα	οα	οα	α	, α	000		οα	0 00	· œ			000	ω	8	8	8	8	9	64	64	116	117	117	117	117	117	117	117	117	Score	
6.0	6.0	•	•	•	•	•	•	•	•	•	ά	ά	ά	•		•		•										6.8				7	4	4	99.1	<u>ح</u> د			, 0	. 0	0	0	0	Match	
483	437	417	384	382	377	366	315	139	22	22		349980		2086T	8/78	406/	1192	1184	1026	455	455	455	455	455	455	252	252	252	252	252	252	1338	236	196	748	211	771	771	771	771	763	763		Length	
21	22	21	ы	N	ĸ,	N	N	6.3	N			. K	١.	1 · K ·		٠.				٠.					٠.		٠.	٠.			٠.	٠.			2 1					٠.			20	B	
7.5	3349	AAC93740	AAH84549	AAS39181	AAX58890	AAF93313	AAA69618	AAC11351	AAC82111	AAX01690	AAAB1489	AAF21611	AAABISIB	ABL12950	ABLI1584	ABL21988	AAC37784	AAC49335	AAC43394	AAI34405	AAI13058	AAK28481	ABA24524	ABA54755	ABA44303	AAI47581	AAI22295	AAK41539	ABA34452	ABA67371	ABA49458	AAS92056	AAX01684	AAX01683	AAZ98158	AAF 54 298	AAC85962	AAS21491	AAA37062	AAA77668	168	õ	9	ij	SUMMARIES
											•						-																												
ORFX ORF846	an cDNA encodi		င္ပ	human diagn	erae c	Myelogenous leukae	둫	Ğ,	id pu	ne	eningi:	sseria		sophila me	la me	æ me	S	8	dopsis thali	#3091 used	22	bone marro	#2990 for g	foetal live	brea	#16267 used	#12228	n bone marrow	#12918 for	foetal live	breast cell	oding nove	* * * * * * * * * * * * * * * * * * * *	ביישרי לישרי	Signal nont	ncoding F	Native sequence o	CDNA seq	PRO1274 (	PRO1274 CDN	ry tract tis	cy tract	Human bladder tumo	cription	
	_			_				•	••	7	_	٠.	_	-			-	-		c	Ü		Œ	н	•	,		•		4		<u> </u>	ם מ	i, 0	- ()	ίŋ	f	( )	~	,D	S)	0	J		

## ALIGNMENTS

RESULT 1 AAZ24391

AAZ24391 standard; cDNA; 762 BP

AAZ24391;
14-FEB-2000 (first entry)
Human bladder tumour cDNA library derived EST 3.
Expressed sequence tag; human; bladder; tumour; cancer; cytostatic; treatment; gene therapy; EST; ss.
Homo sapiens.
DE19818619-A1.

28-OCT-1999

```
RESULT 2
AAX01686
                                                          õ
                                                                         밁
                                                                                    Ωy
                                                                                                    망
                                                                                                               Ş
                                                                                                                              밁
                                                                                                                                           õ
                    밁
                                õ
                                              밁
                                                                                                                                                         及
                                                                                                                                                                    Q
                                                                                                                                                                                                                                                       US-09-092-297-17 (1-117) x AAZ24391
                                                                                                                                                                                                               Best Local Similarity:
                                                                                                                                                                                                                      Percent Similarity:
                                                                                                                                                                                                                                                                      New nucleic acid sequences expressed in bladder tumor tissue, and derived polypeptides, for treatment of bladder tumor and identification of therapeutic agents -
                                                                                                                                                                                                                                                      Sequence 762 BP; 162 A; 232 C;
                                                                                                                                                                                                                                                                                                                                                                                            Claim 3; Page 62; 132pp; German.
                    303
                                 101
                                                                          183
                                                                                                     123
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rosenthal A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21-APR-1998;
                                                           81
                                                                                       61
                                                                                                                 41
                                                                                                                               63
                                                                                                                                            21
                                                                                                                                                       AsnCysAspSerAlaArgThrSerAspAspArgLeuCysArgSerValSer 117
                                           CTGATGCTGTGCCAGCCACACAGAGAGATGTGGGGGACAAGTTCTACGACCCCCTGCAGCAC
                                                                                                         LeuMetLeuCysGlnProHisLysArgCysGlyAspLysPheTyrAspProLeuGlnHis
                                                                                                                                    PheCysIleSerArgLeuLeuCysSerHisGlyAlaProValAlaProMetThrProTyr
                                                                                                                            TTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCCAGTGGCCCCCCATGACTCCTTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                      1999-612028/53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                METAGEN GES GENOMFORSCHUNG
                                                                                                                                                                                                                                                                    represented in AAY66143-Y66198.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Specht T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98DE-1018619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98DE-1018619
                                                                                                                                                                                                5.62e-111
117.00
100.00%
100.00%
100.00%
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hinzmann B, Schmitt A,
                                                                                                                                                                                                                                                     194 G; 174 T; 0 other;
                                                                                                                                                                                   (1-762)
                                                                                                                                                                                                       Conservative: Mismatches: Indels:
                                                                                                                                                                                                Gaps:
                                                                                                                                                                                                762
117
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pilarsky C,
                  353
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Dahl
                                                          100
                                                                       242
                                                                                    80
                                                                                                 182
                                                                                                               60
                                                                                                                                                       62
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ħ
```

```
В
                             δÃ
                                                             밁
                                                                                       δ
                                                                                                                    US-09-092-297-17 (1-117) x AAX01686 (1-763)
                                                                                                                                                                 Query Match:
                                                                                                                                                                              Percent Similarity: .
Best Local Similarity:
                                                                                                                                                                                                                                       Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                              This represents a full-length sequence of a clone specific for urinary tract tissue library BL172. The BL172 polynucleotides (AAX01683-87) are used to detect target BL172 polynucleotides and BL172 mRNA and the BL172 polypeptides are used to detect BL172 antigens/antibodies in a test sample. The identification of certain markers in these methods are indicative of the presence of urinary tract disease, especially cancer. Additionally, the polypeptides are used to detect antibodies that bind specifically to a BL172 epitope derived from a BL172 polypeptide. Host
                                                                                                                                                                                                                                                                                                        cells containing a recombinant expression vector comprising the BL172 polynucleotide sequences are used to produce the polypeptides containing BL172 epitopes. The methods aid in diagnosis, detection, staging, monitoring, prognostication, in vivo imaging, prevention and treatment of diseases or conditions associated with BL172, especially urinary
                                                                                                                                                                                                                           8
0
::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New purified polynucleotide BL172 derivatives and encode polypeptides - useful in the identification of markers, indicative of urinary tract diseases or conditions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 1999-045802/04.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Billing-medel PA,
Gordon J, Granado
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 1; Page 89-90; 114pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Roberts-Rapp L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              05-JUN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (ABBO ) ABBOTT LAB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             05-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO9855656-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAX01686 standard; DNA; 763
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                              w
                                                                         1 ProLeuGlnProProArgAlaMetAlaProArgGlyCysIleValAlaValPheAlaIle
                PheCysIleSerArgLeuLeuCysSerHisGlyAlaProValAlaProMetThrProTyr
TTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCCATGACTCCTTAC
                                                        CCACTGCAACCACCCAGAGCCATGGCTCCCCGAGGCTGCATCGTAGCTGTCTTTGCCATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Granadosen, Hodg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tissue library BL172 gene full length clone 1554838IH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                97US-0869579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            98WO-US11693.
                                                                                                                                                                                                                                                                    162 A;
                                                                                                                                                5.63e-111
117.00
100.00%
100.00%
100.00%
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cohen M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               marker;
                                                                                                                                                                                                                                                                   231 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hodges
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Colpitts TL,
ges SC, Klass
, Stroupe SD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ВÞ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cancer; recombinant;
                                                                                                                                                                                                                                                                    195 G; 175
                                                                                                                                                Gaps:
                                                                                                                                                                                                       Length:
Matches:
                                                                                                                                                            Mismatches:
Indels:
                                                                                                                                                                                            Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MR,
Yu
                                                                                                                                                                                                                                                                   Τ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Friedman
                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Kratochvil JD;
H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             encoded
rkers, which
 122
                                                          62
                             40
```

VQ

41

60

182

밁

123

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                            This represents a consensus sequence of a clone specific for urinary tract tissue library BL172. The BL172 polynucleotides (AAX01683-87) are used to detect target BL172 polynucleotides and BL172 mNNA and the BL172 polypeptides are used to detect BL172 antigens/antibodies in a test sample. The identification of certain markers in these methods are indicative of the presence of urinary tract disease, especially cancer. Additionally, the polypeptides are used to detect antibodies that bind specifically to a BL172 epitope derived from a BL172 polypeptide. Host cells containing a recombinant expression vector comprising the BL172 polynucleotide sequences are used to produce the polypeptides containing BL172 epitopes. The methods aid in diagnosis, detection, staging, monitoring, prognostication, in vivo imaging, prevention and treatment of diseases or conditions associated with BL172, especially urinary
                                                                                                                                                                                                                                                         New purified polynucleotide BL172 derivatives and encoded polypeptides - useful in the identification of markers, w indicative of urinary tract diseases or conditions
                                                                                                                                                                                                                                                                                                                                                                          Billing-medel PA, Cohe
Gordon J, Granadosen,
                                                                                                                                                                                                                                   Claim 1; Page 90;
                                                                                                                                                                                                                                                                                                                                                                                                                                               05-JUN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         05-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO9855656-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BL172; urinary tract; marker; cancer; recombinant; human; ss
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Urinary tract
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAX01687;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAX01687 standard; DNA; 763
                                                                                                                                                                                                                                                                                                                                                           Roberts-Rapp L, Russell JC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                    (ABBO ) ABBOTT LAB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                    1999-045802/04.
DB; AAW92252.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PheArgValCysPheGluGlnCysCysProTrpThrPheMetValLysLeuIleAsnGln 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AsnCysAspSerAlaArgThrSerAspAspArgLeuCysArgSerValSer 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 tissue library
                                                                                                                                                                                                                                                                                                                                                                                                                                               97US-0869579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         98WO-US11693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
3..356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /product= "BL172 polypeptide"
/note= "the start codon is not indicated"
                                                                                                                                                                                                                                  114pp; English.
                                                                                                                                                                                                                                                                                                                                                                                       Cohen M,
                                                                                                                                                                                                                                                                                                                                                                          Hodges
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ВP
                                                                                                                                                                                                                                                                                                                                                        Colpitts TL, Friedies SC, Klass MR, K. Stroupe SD, Yu H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BL172 gene consensus sequence
                                                                                                                                                                                                                                                                                                                                                                                    Friedman PN;
                                                                                                                                                                                                                                                                                                                                                                        Kratochvil JD;
                                                                                                                                                                                                                                                                         which
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     242
```

Alignment Scores

Sequence 763

BP;

162 A;

231 C;

194 G;

175 Ŧ;

other;

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                     Q
                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                         AAA77668
                                                                                                                                                                                                                                                                                                                                                                  RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÕ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-092-297-17 (1-117) x AAX01687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pred. No.:
                           08-SEP-1999
13-SEP-1999
                                           26-JUL-1999
01-SEP-1999
                                                                                                                                                                                                                                                Human; PRO; promotion; inhibition; angiogenesis; cardiovascularisation; diagnosis; trauma; wound; cancer; atherosclerosis; cardiac hypertrophy; angiogenic; proliferative; cardiant; cardiovascular; antiatherosclerotic;
                                                                                                                                     01-DEC-1998;
16-DEC-1998;
                                                                                14-MAY-1999;
02-JUN-1999;
                                                                                                                                                                                    08-JUN-2000
                                                                                                                                                                                                       WO200032221-A2
                                                                                                                                                                                                                                         angiogenic; proliferative; cardiant; c
cytostatic; gene therapy; vaccine; ss.
                                                              20-JUL-1999
                                                                                                                                                                 30-NOV-1999;
                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                        Human PRO1274 cDNA sequence
                                                                                                                                                                                                                                                                                                           07-NOV-2000
                                                                                                                                                                                                                                                                                                                              AAA77668;
                                                                                                                                                                                                                                                                                                                                               AAA77668 standard;
                5-SEP-1999
                                                                                                   28-APR-1999
                                                                                                                      08-MAR-1999
                                                                                                                              L2-JAN-1999,
                                                                                                             .2-MAR-1999;
                                                                                                                                                                                                                                                                                                                                                                                    303
                                                                                                                                                                                                                                                                                                                                                                                                      101
                                                                                                                                                                                                                                                                                                                                                                                                                        243
                                                                                                                                                                                                                                                                                                                                                                                                                                                             183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   123
                                                                                                                                                                                                                                                                                                                                                                                                                                           81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 ProLeuGlnProProArgAlaMetAlaProArgGlyCys11eValAlaValPheAla1le
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             w
                                                                                                                                                                                                                                                                                                                                                                                 TGTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCAGACGTGTGGAAACTGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CysCysTyrAspAspAlaValValProLeuAlaArgThrGlnThrCysGlyAsnCysThr
                                                                                                                                                                                                                                                                                                                                                                                                                    TTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCTGATAAACCAG
                                                                                                                                                                                                                                                                                                                                                                                                                              PheArgValCysPheGluGlnCysCysProTrpThrPheMetValLysLeuIleAsnGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCACTGCAACCACCCAGAGCCATGGCTCCCCGAGGCTGCATCGTAGCTGTCTTTGCCATT
                                                                                                                                                                                                                                                                                                         (first entry)
               99US-0144758.
99US-0145698.
99WO-US20111.
99WO-US20594.
99WO-US20944.
99WO-US21090.
                                                                     99WO-US12252
99US-0141037
                                                                                        99US-0131445
99US-0134287
                                                                                                           99WO-US05028
99US-0123957
                                                                                                                              99US-0115554
                                                                                                                                       98US-0112850
                                                                                                                                                                 99WO-US28313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5.63e-111
117.00
100.00%
100.00%
100.00%
20
                                                                                                                                                                                                                                                                                                                                               771
                                                                                                                                                                                                                                                                                        SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (1-763)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative:
                                                                                                                                                                                                                                                                                        NO:196
                                                                                                                                                                                                                                                                                                                                                                                                                                        100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              80
                                                                                                                                                                                                                                                                                                                                                                                                                                                            242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         62
```

```
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-092-297-17. (1-117) x AAA77668 (1-771)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Alignment Scores:
        AAA37062;
                                   AAA37062 standard; cDNA; 771 BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .
No::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  useful for preventing, diagnosing and treating diagnosing a cardiovascular, endothelial or angiogenic disorder in mammals by modulating cell proliferation, angiogenic disorder in mammals by and for identifying agonists and antagonists of these processes. The nucleic acids and the proteins they encode may be used in the prevention, treatment and diagnosis of diseases associated with inappropriate PRO expression such as cardiovascular, endothelial or angiogenic disorders in mammals (e.g. atheroselerosis, cancers and cardiac hypertrophy). For example, the nucleic acids (NCs) and vectors containing them and the PRO polypeptide may be used to treat disorders associated with decreased PRO expression. AAA77510 to AAA77721 and AAB2438 to AAB2435 represent nucleotide and protein sequences used in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ashkenazi AJ,
Godowski PJ,
Watanabe CK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nucleic acids encoding PRO polypeptides useful for preventing, diagnosing and treating diagnosing a cardiovascular, endothelial or angiogenic disorders in mammals -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 61; Fig 75; 315pp; English.
                                                                                          303
                                                                                                                                                  243
                                                                                                                                                                                                        183
                                                                                                                                                                                                                                                               123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29-OCT-1999;
                                                                                                                      101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (GETH ) GENENTECH INC
                                                                                                                                                                            81
                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                         41
                                                                                                                                                                                                                                                                                                               w
                                                                                     ProLeuglnProProArgAlaMetAlaProArgGlyCysIleValAlaValPheAlaIle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     present invention describes nucleic acids encoding
                                                                                                                                                                                                                    CysCysTyrAspAspAlaValValProLeuAlaArgThrGlnThrCysGlyAsnCysThr
                                                                                                                                                                                                    TGTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCAGACGTGTGGAAACTGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000-412154/35.
DB; AAB24425.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            , Baker KP, F
Gurney AL, K
Williams PM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9908-0162506.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           169 A; 231 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5.68e-111
117.00
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ferrara N,
Klein RD,
M, Wood WI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          195 G; 176 T; 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative: Mismatches: Indels: Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gerber H,
Kuo SS, Pa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         H, Hillan KJ,
Paoni NF, Sm:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Smith V;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    polypeptides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Goddard A;
                                                                                                                                                                          100
                                                                                                                                                                                                    242
                                                                                                                                                                                                                                                          182
                                                                                                                                                                                                                                                                                     60
                                                                                                                                                                                                                                                                                                                122
                                                                                                                                                                                                                                                                                                                                            40
                                                                                                                                              302
                                                                                                                                                                                                                                80
                                                                                                                                                                                                                                                                                                                                                                        62
     24-SEP-1998;
29-SEP-1998;
29-SEP-1998;
29-SEP-1998;
29-SEP-1998;
29-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-SEP-1998;
01-SEP-1998;
01-SEP-1998;
                                                                                   24-SEP-1998;
24-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human; PRO polypeptide; membrane bound protein; receptor;
transmembrane; secretion; immunoadhesion; pharmaceutical;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200012708-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human PRO1274 (UNQ644) cDNA sequence SEQ ID NO:137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              08-AUG-2000 (first entry)
98US-0101472
98US-0101474
98US-0101475
98US-0101476
98US-0101477-
98US-0101779-
98US-0101743
98US-0101743
98US-0101915
98US-0101915
98US-0101915
98US-0102207-
98US-0102207-
98US-0102233
                                                                                                                                                                                                                                                      98US-0100849.
98US-0101014.
98US-0101068.
98US-0101071.
                                                                                                                                                                                                                                                                                                             98US-0100919.
98US-0100930.
98US-0100848.
                                                                                                                                                                                                                           98US-0101279
98US-0101471
                                                                                                                                                                                                                                                                                                                                                                     98US-010071
                                                                                                                                                                                                                                                                                                                                                                                                                98US-0100664
                                                                                                                                                                                                                                                                                                                                                                                                                           9805-0100662
                                                                                                                                                                                                                                                                                                                                                                                                                                                      98US-0100627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98US-0100584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98US-0100390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99WO-US20111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      screening;
```

õ 밁 δÃ 밁 Q.

δÃ B

B Š

밁 Q 밁

```
(GETH
                                                                                  Baker
         2000-237871/20.
DB; AAY99380.
                                                                                                                           GENENTECH INC
                                                                           Goddard A,
                                                                                                                                                                    98US-0108801

98US-0108806

98US-0108806

98US-0108807

98US-0108825

98US-0108825

98US-0108825

98US-0108850

98US-0108850

98US-0108850

98US-0108850

98US-0108850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          98US-0106902
98US-0106903
98US-0106919
98US-0106932
98US-0107783
98US-0108778
98US-0108775
98US-0108778
98US-0108778
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98US-0106033
98US-0106248
98US-0106248
98US-0106384
98US-0108500
98US-0106464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98US-0104987

98US-0105000

98US-0105002

98US-0105104

98US-0105169

98US-0105693

98US-0105693

98US-0105887

98US-0105887

98US-0105882

98US-0105882
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  98US-0103449.
98US-0103314.
98US-0103315.
98US-0103328.
98US-0103395.
98US-0103396.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98US-0103401
98US-0103633
                                                                           Gurney
                                                                             ĄĽ,
                                                                             Smith
                                                                           <
                                                                           Watanabe
                                                                        WI;
RESULT 6
AAS21491
ID AAS2
XX AAS2
XX AAS2
XX Humax
XX Hum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-092-297-17 (1-117) x AAA37062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human secretory and transmembrane; PRO; mammalian; cancer; lung; breast; prostate; cervical; tumour necrosis factor-alpha; TNP-alpha; cartilage; ear; proliferation; glucose; free fatty acid; skeletal muscle; adipocyte; A-peptide; factor VIIA; gene therapy; ss.
                                              WO200140466-A2.
                                                                                                                                                                                                                                                  Human cDNA sequence encoding
                                                                                       Homo sapiens.
                                                                                                                                                                                                                                                                                                     24-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                               AAS21491 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAA37022 to AAA37144 encode the new isolated human transmembrane, receptor or secreted PRO polypeptides given in AAY9340 to AAY99462. The transmembrane and receptor PRO proteins can be used for screening of potential peptide or small molecule inhibitors of the relevant receptor/ligand interactions. The polypeptides and nucleotide sequences encoding then have various industrial applications, including uses as pharmaceutical and diagnostic agents. AAA37145 to AAA37330 represent PCR primers and hybridisation probes used in the isolation of the PRO polypeptides from the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New mammalian DNA sequences encoding transmembrane, receptor or secreted PRO polypeptides, useful for screening of potential peptide or small molecule inhibitors of the relevant receptor/ligand interactions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 771 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             No
..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              41 LeuMetLeuCysGlnProHisLysArgCysGlyAspLysPheTyrAspProLeuGlnHis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PheCysIleSerArgLeuLeuCysSerHisGlyAlaProValAlaProMetThrProTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTGATGCTGTGCCAGCCACACAAGAGATGTGGGGACAAGTTCTACGACCCCCTGCAGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCCAGTGGCCCCCATGACTCCTTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Fig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         81; 773pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            169 A; 231 C;
                                                                                                                                                                                                                                                                                                                                                                                            CDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5.68e-111
117.00
100.00%
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                  for PRO1274 polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (1-771)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          195 G; 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Τ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0 other
```

100 302

242 90 182 60 122 62

01-DEC-2000;

2000WO-US32678

99WO-US28301

```
Pred. No.:
                                 Alignment Scores:
                                                                                 CC AAS21244-AAS21518 encode for novel human secretory and transmembrane CC PRO polypeptides. The PRO polypeptides are useful to detect other CC PRO polypeptides, to link bioactive molecules to cells expressing CC PRO polypeptides, to modulate biological activities of cells expressing CC PRO polypeptides, and to detect the presence of mammalian lung, colon, CC breast, prostate, rectal, cervical or liver tumours by comparing PRO CC polypeptide expression in a cell sample to that in a control sample. CC Some of the 275 sequences are also useful to stimulate the release of tumour necrosis factor-alpha (TNF-alpha) from human blood, the cC proliferation or differentiation of chondrocytes, the proliferation or cartilage, the proliferation of inner ear utricular supporting cells or CC gene expression in pericyte cells, the release of proteoglycans from CC cartilage, the proliferation of inner ear utricular supporting cells or CC of T-lymphocytes, the proliferation of endothelial cells. Some of the PRO polypeptides may modulate glucose or free fatty acid uptake by CC molecules involved in binding interactions. The polynucleotides encoding CC pRO polypeptides can be used to generate probes, antisense RNA/DNA, YXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 24-FEB-2000;
01-MAR-2000;
20-MAR-2000;
21-MAR-2000;
30-MAR-2000;
17-MAY-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                        Isolated, secretory and transmembrane PRO polypeptide used to detect other PRO polypeptides, link bloactive molecules to cells expressing PRO polypeptides, and detect the presence of mammalian tumours e.g. lung, breast, prostate, cervical
                                                                                                                                                                                                                                                                                                                                                                                                       Claim 3; Fig 495; 813pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Baker KP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gerritsen ME,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (GETH ) GENENTECH INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2001-408281/43.
DB; AAU12419.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Stewart TA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Beresini M,
ME, Goddard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000WO-US00277.
2000WO-US00376.
2000WO-US03565.
2000WO-US04341.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000WO-US05004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2000WO-US04414
2000WO-US04914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000WO-US14941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000WO-US14042
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           000WO-US05601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99WO-US31243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99WO-US30095
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99US-0170262
                                                           169 A; 231 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Deforge L, Desnoyers L, Filvaroff E, G
A, Godowski PJ, Gurney AL, Sherwood S;
Tumas D, Watanabe CK, Wood WI, Zhang Z;
                                                             195
Length:
Matches:
                                                           <u>و</u>
                                                           176
                                                           1
                                                           0
                                                           other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gao
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                 KW PRO; PRO1081; PRO1274; PRO10272; proliferation; T-lymphocyte;
WW Infiltration; mononuclear cell; eosinophi; errythema multiforme;
KW infiltration; mononuclear cell; eosinophi; errythema multiforme;
KW polymorphonuclear neutrophil; PNN; antibody; immune-related disorder;
KW gystemic lupus erythematosus; rheumatoid arthritis; osteoarthritis;
KW juvenile chronic arthritis; spondyloarthropathy; systemic sclerosis;
KW idopathic inflammatory myopathy; Sjogren's syndrome; skin disease;
KW systemic vasculitis; sarcoidosis; autoimmune haemolytic anaemia; asthma;
KW systemic vasculitis; sarcoidosis; autoimmune haemolytic anaemia; asthma;
KW immune-mediated renal disease; demyelination; central nervous system;
KW jeripheral nervous system; idiopathic demyelinating polyneuropathy;
KW Guillain-Barre syndrome; hepatobiliary disease; eosinophilic pneumonia;
KW granulomatous hepatitis; sclerosing cholangitis; food hypersensitivity;
KW Whipple's disease; diopathic pulmonary fibrosis; contact dermatitis;
KW whipple's disease; diopathic pulmonary fibrosis; contact dermatitis;
KW psoriasis; atopic dermatitis; hypersensitivity pneumonitis;
KW graft rejection; graft-versus-host disease; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-092-297-17 (1-117) x AAS21491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Percent Similarity:
Best Local Similari
          WO200140465-A2
                                               mat_peptide
                                                                      sig_peptide
                                                                                                                                                                                                                                                                                                                                                                                                            Native sequence of PRO1274 cDNA, clone DNA64889-1541.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAC85962;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAC85962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ω
                                                                                                                                                sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AsnCysAspSerAlaArgThrSerAspAspArgLeuCysArgSerValSer 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LeuMetLeuCysGlnProHisLysArgCysGlyAspLysPheTyrAspProLeuGlnHis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      standard;
                                  /*tag=_b
96.353
/*tag=_c
                                                                      /product=
24..95
                                                                                              /*tag=
                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100
100
22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .00%
                                                                                 "PRO1274 polypeptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (1-771)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            62
```

```
Alignment
Pred. No.:
                                                                                                                                                                                                                                                                    밁
                                                                                 δÃ
                                                                                                            US-09-092-297-17 (1-117) x AAC85962
                                                                                                                                               Query Match:
DB:
                                                                                                                                                                       Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                   cc mononuclear cells, essinophils or polymorphoruclear neutrophils (PMN)
Cc into the tissue of a mammal. The PRO cDNA's and antibodies which
cc bind to them, are used to treat an immune-related disorder in a
cc mammal. Such disorders include systemic lupus erythematosus,
cc rheumatoid arthritis, osteoarthritis, juvenile chronic arthritis, a
cc spondyloarthropathy, systemic sclerosis, an idiopathic inflammatory
cc myopathy, Sjogren's syndrome, systemic vasculitis, sarcoidosis,
cc diabetes mellitus, immune-mediated renal disease, a demyelinating
cc disease of the central or peripheral nervous system, idiopathic
cc disease of the central or peripheral nervous system, idiopathic
cc disease of the central or peripheral nervous system, idiopathic
cc inflammatory demyelinating polyneuropathy, a hepatobiliary disease,
cc infectious or autoimmune chronic active hepatitis, primary disease,
cc inflammatory bowel disease, gluten-sensitive enteropathy, Whipple's
cc disease, an autoimmune or immune-mediated skin disease, a bullous skin
cc disease, arythema multiforme, contact dermatitis, psoriasis, an
cc allergic disease, asthma, allergic rhinitis, atopic dermatitis, food
ce sinophilic pneumonia, idiopathic pulmonary fibrosis, hypersensitivity
cc ensinophilic pneumonia, idiopathic pulmonary fibrosis, hypersensitivity
cc pneumonitis, a transplantation associated disease, graft rejection or
craft-varance-hert disease.
                                                                                                                                                                                                                          NO::
                                                                                                                                                                                                                                                                    Sequence 771
                                                                                                                                                                                                                                                                                                 graft-versus-host
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11-JAN-2000;
20-JAN-2000;
18-FEB-2000;
03-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The sequences given in AAC85961-69 encode PRO polypeptides. PRO1081, PRO1274 and PRO10272 stimulate the proliferation of T-lymphocytes and PRO1199, PRO1556, PRO4401 and PRO10268 inhibit the proliferation of T-lymphocytes. PRO1754 and PRO9912 act to enhance the infiltration of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Isolated PRO polypeptide useful for treat or diagnose an immune-related disorder e.g. arthritis, asthma, allergy, diabetes or psoriasis -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fong
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (GETH )
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   30-MAY-2000;
05-JUN-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               23-DEC-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10-NOV-2000;
                       21
                                                      w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -DEC-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     τς,
το,
                                              PheCysIleSerArgLeuLeuCysSerH1sGlyAlaProValAlaProMetThrProTyr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2001-381384/40.
DB; AAB47292.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>ب</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENENTECH INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Goddard A, Go
Watanabe CK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 99US-0172059.
000US-0175481.
2000US-0177118.
2000WO-US04342.
2000US-0187202.
2000WO-US14941.
2000US-0209832.
2000WO-US23328.
                                                                                                                                                                                                                                                                      BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000WO-US30873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99WO-US28313
99US-0170262
                                                                                                                                                                                                                                                                 169 A; 231
                                                                                                                                            5.68e-111
117.00
100.00%
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Godowski PJ,
SK, Wood WI,
                                                                                                                                                                                                                                                                   û
                                                                                                             (1-771)
                                                                                                                                                                                                                                                                   195
                                                                                                                                                       Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Grimaldi CJ,
Zhang Z;
                                                                                                                                                                                                                                                                   G; 176
                                                                                                                                                                                                                                                                   Ή,
                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                              other;
                                                                                                                                          771
117
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gurney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hillan
                   40
                                                                            20
                                               62
```

```
문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         β
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
               The present invention relates to secreted and transmembrane proteins. These proteins and the DNA encoding them may be used as hybridization probes, in chromosome and gene mapping and in the generation of anti-sense RNA and DNA. They may also be used used to generate either transgenic animals or knockout animals which are in turn useful for development and screening of therapeutically useful reagents. The nucleic acids may also be used in gene therapy.
                                                                                                                                                                                                                                                 29-OCT-1999;
30-NOV-1999;
02-DEC-1999;
16-DEC-1999;
                                                                                                                 Secreted and transmembrane proteins and nucleic acids designated PRO, useful as hybridization probes, in chromosome and gene mapping and ge
Sequence
                                                                                           Claim
                                                                                                                                                                                             Baker
                                                                                                                                                                                                                                05-JAN-2000;
06-JAN-2000;
                                                                                                                                                                   Watanabe
                                                                                                                                                                                                              (GETH
                                                                                                                                                                                                                                                                                                      23-JUN-1999;
20-JUL-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                         DNA encoding
                                                                                                                                                                                                                                                                                     01-SEP-1999;
                                                                                                                                                                                                                                                                                                                                  18-FEB-2000;
                                                                                                                                                                                                                                                                                                                                                    28-DEC-2000
                                                                                                                                                                                                                                                                                                                                                                     WO200078961-A1
                                                                                                                                                                                                                                                                                                                                                                                                        Secreted; transmembrane; gene therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                             02-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAF54298;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAF54298 standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    41
                                                                                                                                                                        D W, Goddard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      63
                                                                                                                                                                                C KP, Botst
                                                                                                                                               2001-071395/08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  <u>ب</u>
                                                                                                                                                                                                              ) GENENTECH INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCTGATAAACCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PheArgValCysPheGluGlnCysCysProTrpThrPheMetValLysLeuIleAsnGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCATGACTCCTTAC
                                                                                                             as hybridization
y -
 771
                                                                                         Fig
                                                                                                                                                                  CK,
                                                                                                                                                                                  Botstein D, Desno
ddard A, Godowski
                                                                                                                                                                                                                              99US-0145698.
99WO-US20111.
99US-0162506.
99WO-US28313.
99WO-US28551.
99WO-US28551.
99WO-US30095.
2000WO-US300376.
ВP;
                                                                                       81; 787pp; English.
                                                                                                                                                                 ard A, God
L NF, Roy
Williams
                                                                                                                                                                                                                                                                                                                                                                                                                         protein of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                 2000WO-US04342
                                                                                                                                                                                                                                                                                                      99US-0141037
99US-0144758
169 A;
                                                                                                                                                                 MA,
231 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                771
                                                                                                                                                                                           Desnoyers
                                                                                                                                                              ssnoyers L, Eaton DL, Fe
ki PJ, Grimaldi CJ, Gur
Smith V, Stewart TA,
Wood WI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ВP
195
G;
176
Ŧ,
                                                                                                                                                                                 Ferrara
Gurney AI
                                                                                                                                                                        urney AL,
Tumas D;
                                                                                                                                                                                         z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   353
                                                                                                                                                                                Fong S;
Hillan KJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100
                                                                                                                  gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    122
```

```
Percent Similarity:
Best Local Similarity:
Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                            RESULT 9
  밁
                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ₿
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-092-297-17 (1-117) x AAF54298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment :
Pred. No.:
staging and of bladder of
       A method has been developed for detecting, diagnosing metastasis staging and monitoring the onset of metastasis or a change in sta
                                                        Detecting, diagnosing metastasis, treating bladder cancer, involves levels in cells or body fluids
                                                                                                                         Salceda S,
                                                                                                                                                                  02-SEP-1998;
                                                                                                                                                                                                           09-MAR-2000
                                                                                                                                                                                                                              WO200012761-A1
                                                                                                                                                                                                                                                   Homo sapiens.
                                                                                                                                                                                                                                                                      detection; metastasis;
                                                                                                                                                                                                                                                                               Human; bladder specific gene; BSG;
                                                                                                                                                                                                                                                                                                     Human bladder specific gene 22638 clone 819141H SEQ ID NO:1.
                                                                                                                                                                                                                                                                                                                          22-JUN-2000
                                                                                                                                                                                                                                                                                                                                              AAA08111;
                                                                                                                                                                                                                                                                                                                                                                   AAA08111 standard;
                                                                                                                                             (DIAD-) DIADEXUS LLC
                                                                                                                                                                                                                                                                                                                                                                                                            303
                                                                                                                                                                                                                                                                                                                                                                                                                              101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000-256658/22.
                                                                                                                                                                                                                                                                                                                                                                                                                    AsnCysAspSerAlaArgThrSerAspAspArgLeuCysArgSerValSer 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                            PheArgValCysPheGluGlnCysCysProTrpThrPheMetValLysLeuIleAsnGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CysCysTyrAspAspAlaValValProLeuAlaArgThrGlnThrCysGlyAsnCysThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCATGACTCCTTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGATGCTGTGCCAGCCACACAAGAGATGTGGGGGACAAGTTCTACGACCCCCTGCAGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LeuMetLeuCysGlnProHisLysArgCysGlyAspLysPheTyrAspProLeuGlnHis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PheCysIleSerArgLeuLeuCysSerHisGlyAlaProValAlaProMetThrProTyr
                                                                                                                                                                                                                                                                                                                                                                                                          AACTGCGACTCAGCCCGGACCTCGGATGACAGGCTTTGTCGCAGTGTCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTCAGAGTCTGCTTTGAGCAGTGCTGCCCCTGGACCTTCATGGTGAAGCTGATAAACCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCAGACGTGTGGAAACTGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Scores:
                                        Page 25-26;
                                                                                                                        Sun Y,
                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                 98US-0098825
                                                                                                                                                                                      99WO-US20003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5.68e-111
117.00
100.00%
100.00%
100.00%
22
                                                                                                                        Recipon H,
                                     31pp; English.
                                                                                                                                                                                                                                                                      cytostatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (1-771)
                                                                                                                       Cafferkey
                                                                    measuring
                                                                                staging,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative:
                                                                                                                                                                                                                                                                      bladder cancer; ds.
                                                                   monitoring, imaging and g bladder specific gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              771
117
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                          353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100
                                                                    (BSG
                                                                                                                                                                                                                                                                                                                                                                                                                                                  302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    62
```

by measuring bladder specific gene

(BSG) levels

ij

Parkinson's disease; Huntington's

diseases;

ovulatory

SS

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                  Дb
                                                                                                                                                                                                                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-092-297-17 (1-117) x AAA08111 (1-914)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alignment Scores:
                                                                                            Human; signal peptide-containing protein; HSPP; diagnosis; cancer; inflammation; cardiovascular disease; anticancer; anti-inflammatory; antimicrobial; nootropic; neuroprotective; cardiovascular; hepatotropic antimatic; gene therapy; cell proliferation; neurological disorder; reproductive disorder; developmental disorder; arteriosclerosis; cirrhosis; psoriasis; acquired immune deficiency syndrome; anaemia; asthma; Crohn's disease; infection; Alzhelmer's disease; schizophrenia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cells, tissues or body fluids. An increase in BSG levels compared to normal human control is associated with the presence or progression of bladder cancer, a decrease is associated with cancer regression. The method comprising measuring BSG is useful for detecting, diagnosing metastasis, staging and monitoring the onset of metastasis or a change in stage of bladder cancer. An antibody against BSG (1) labeled with paramagnetic ions or an isotope is useful for imaging bladder cancer and (1), especially conjugated to a cytotoxic agent is useful for treating bladder cancer. The method is efficient in discriminating between bladder cancer which has metastasised and the bladder cancer which has not metastasised. The present sequence represents a BSG sequence used in the exemplification of the present invention.
                                                                                                                                                                                                                      Human signal
                                                                                                                                                                                                                                                    11-MAY-2000
                                                                                                                                                                                                                                                                                                              AAZ98158 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 914 BP;
                                                                                                                                                                                                                                                                                                                                                                        335
                                                                                                                                                                                                                                                                                                                                                                                                     101
                                                                                                                                                                                                                                                                                                                                                                                                                                  275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Мо
..
                                                                                                                                                                                                                                                                                                                                             10
                                                                                                                                                                                                                                                                                                                                                                                                                                                              81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CysCysTyrAspAspAlaValValProLeuAlaArgThrGlnThrCysGlyAsnCysThr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LeuMetLeuCysGlnProHisLysArgCysGlyAspLysPheTyrAspProLeuGlnHis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PheCysIleSerArgLeuLeuCysSerHisGlyAlaProValAlaProMetThrProTyr
                                                                                                                                                                                                                                                                                                                                                                                                                               PheArgValCysPheGluGlnCysCysProTrpThrPheMetValLysLeuIleAsnGln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGTTGCTATGATGATGCCGTCGTGCCCTTGGCCAGGACCCAGACGTGTGGAAACTGCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGATGCTGTGCCAGCCACACAGAGATGTGGGGGACAAGTTCTACGACCCCCTGCAGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTCTGCATCTCCAGGCTCCTCTGCTCACACGGAGCCCCAGTGGCCCCCATGACTCCTTAC
                                                                                                                                                                                                                                                 (first entry) ·
                                                                                                                                                                                                                     peptide containing protein HSPP-50 cDNA SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  193 A; 265
                                                                                                                                                                                                                                                                                                             cDNA; 748
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6.68e-111
117.00
100.00%
100.00%
100.00%
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ç
                                                                                                                                                                                                                                                                                                             ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  237 G; 218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                T; 1 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            914
117
0
0
                                                                                                                                                                                                                                                                                                                                                                                                  117
                                                                                                                                                                                                                     IJ
                                                                                                                                                         hepatotropic,
                                                                                                                                                                                                                     NO:184
                                                                                                                                                                                                                                                                                                                                                                                                                                                             100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            154
```

```
δÃ
                                                                     밁
                                                                                                   Š
                                                                                                                                      밁
                                                                                                                                                                   Ş
                                                                                                                                                                                                   US-09-092-297-17 (1-117) x AAZ98158
                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                       Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                CC (including cancer), inflammation, cardiovascular, neurological, creproductive or developmental disorders, (e.g. arteriosclerosis, CC cirrhosis, psoriasis, acquired immune deficiency syndrome, anaemia, CC asthma, Crohn's disease, microbial or other infections, congestive or cischaemic heart disease, microbial or other infections, congestive or concluded the conference of the congestive or congestive or congestive or standard hybridisation and amplification assays (for congestive or constitutions, and for chromosomal mapping. Hspp are also used to congentic variations, and for chromosomal mapping. Hspp are also used to calse specific antibodies (Ab) and to screen for agonists and congestive or constitution, Hspp-related diseases (in usual immunoassays), as therapeutic constitutive drug screens, and for purification of Hspp cromosomists, in competitive drug screens, and for purification of Hspp cromosomists, in competitive drug screens, and for purification of Hspp cromosomists.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAZ98109 to AAZ98242 encode AAY87224 to AAY87357 which represent the human signal peptide-containing proteins HSPP-1 to HSPP-134. HSPPs have anticancer, anti-inflammatory, antimicrobial, nootropic, hepatotropic, neuroprotective, cardiovascular and antiasthmatic activities, and can be used in gene therapy. HSPPs can be used to treat or prevent disorders associated with decreased activity or function of HSPP. Antagonists of HSPP are used to treat or prevent disorders associated with increased activity or function of HSPP. Such diseases include cell proliferation
                                                                                                                                                                                                                                                                                                                       NO.
                                                                                                                                                                                                                                                                                                                                                                      Sequence 748 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New human signal peptide-containing proteins useful in treatment, prevention and diagnosis of e.g. cancer, inflammation and cardiovascular disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Lal P, 1
Akerblom
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      31-JUL-1998;
01-OCT-1998;
11-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bandman O;
      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (INCY-) INCYTE PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         06-JAN-2000
               42 MetLeuCysGlnProHisLysArgCysGlyAspLysPheTyrAspProLeuGlnHisCys
                                                                       61
                                                                                                      22
                                                                                                                                       \vdash
                                                                                                                                                                       N
                                                                                                                             ATGCTGTGCCAGCCACACAGAGATGTGGGGGACAAGTTCTACGACCCCCTGCAGCACTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Page 281; 327pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               YT, Gorgone GA,
Au-Young J, Yue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98US-0094983.
98US-0102686.
98US-0112129.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99WO-US14484
                                                                                                                                                                                                                                                                                                                                                                      159 A;
                                                                                                                                                                                                                                  5.88e-110
116.00
100.00%
100.00%
99.15%
21
                                                                                                                                                                                                                                                                                                                                                                      227
                                                                                                                                                                                                                                                                                                                                                                      ü
                                                                                                                                                                                                   (1-748)
                                                                                                                                                                                                                                                                                                                                                                      193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Corley NC, Gueg
H, Patterson C;
                                                                                                                                                                                                                                Mismatches:
Indels:
Gaps:
                                                                                                                                                                                                                                                                                   Length:
Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                      ດ
.
                                                                                                                                                                                                                                                                                                                                                                      169
                                                                                                                                                                                                                                                                                                                                                                     <u>₽</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Guegler KJ, Boon C, Reddy R,
                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                   other;
                                                                                                                                                                                                                                748
116
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Baughn MR;
R, Hillman
180
                             61
                                                                                            41
                                                                                                                               60
                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               JL;
```

```
Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAX01683
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                            Sequences AAX01683-85 represent overlapping clones specific for urinary tract tissue library BL172. The BL172 polynucleotides are used to detect target BL172 polynucleotides and BL172 mRNA and the BL172 polypeptides are used to detect BL172 antigens/antibodies in a test sample. The identification of certain markers in these methods are indicative of the presence of urinary tract disease, especially cancer. Additionally, the polypeptides are used to detect antibodies that bind specifically to a BL172 epitope derived from a BL172 polypeptide. Host cells containing a recombinant expression vector comprising the BL172 polynucleotide sequences are used to produce the polypeptides containing BL172 epitopes. The methods aid in diagnosis, detection, staging, monitoring, prognostication, in vivo imaging, prevention and treatment of diseases or conditions associated with BL172, especially urinary tract cancer.
                                                                                                                                                                                                                                                                                                                             New purified polynucleotide BL172 derivatives and encoded polypeptides - useful in the identification of markers, windicative of urinary tract diseases or conditions
                                                                                             Sequence
                                                                                                                                                                                                                                                                                                      Claim 1; Page 89; 114pp; English.
                                                                                                                                                                                                                                                                                                                                                                                     WPI; 1999-045802/04.
                                                                                                                                                                                                                                                                                                                                                                                                              Gordon J, Granadosen, Hodges
Roberts-Rapp L, Russell JC, &
                                                                                                                                                                                                                                                                                                                                                                                                                             Billing-medel PA, Gordon J, Granad
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       05-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             05-JUN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Urinary tract tissue library BL172 gene specific cDNA clone 1554838.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAX01683 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO9855656-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAX01683;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (ABBO ) ABBOTT LAB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CysTyrAspAspAlaValValProLeuAlaArgThrGlnThrCysGlyAsnCysThrPhe
                                                                                              196
                                                                                             BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             97us-0869579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98WO-US11693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tract; marker; cancer; recombinant; human; ss
                                                                                           38 A;
  4.34e-57
64.00
100.00%
100.00%
54.70%
                                                                                                                                                                                                                                                                                                                                                                                                                                        Cohen M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA;
                                                                                           70 C;
                                                                                                                                                                                                                                                                                                                                                                                                           Colpitts TL,
jes SC, Klass
Stroupe SD,
                                                                                           44
                                                                                          .G; 44 T; 0 other;
Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                             s MR, Kratochv;
yu H;
                                                                                                                                                                                                                                                                                                                                                                                                                          Kratochvil JD;
                                                                                                                                                                                                                                                                                                                                            which
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240
```

Percent Similarity:
Best Local Similarity:
Query Match:
DB:

US-09-092-297-17

(1-117) x AAX01683 (1-196)

```
RESULT 12
AAXO1684
ID AAXO1684
ID AAXO1684
ID AAXO1684
ID AAXO1687
AC AAXO1
AC Qrina
XX BL172
XX BL172
XX Homo
XX Homo
XX 10-DE
PR 05-JU
XX 05-JU
XX (ABBO
PR 05-JU
XX (ABBO
PR New P
PT New P
P
                                                                                 Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ő
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
       Percent Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
                                                                                                                                                                Sequences AAXÚ1683-85 represent overlapping clones specific for urinary tract tissue library BL172. The BL172 polynucleotides are used to detect target BL172 polynucleotides and BL172 mnNA and the BL172 polypeptides are used to detect BL172 antigens/antibodies in a test sample. The identification of certain markers in these methods are indicative of the presence of urinary tract disease, especially cancer. Additionally, the polypeptides are used to detect antibodies that bind specifically to a BL172 epitope derived from a BL172 polypeptide. Host cells containing a recombinant expression vector comprising the BL172 polynucleotide epitopes. The methods aid in diagnosis, detection, staging, monitoring, prognostication. In vivo imaging, prevention and treatment of diseases or conditions associated with BL172, especially urinary tract cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 1; Page 89; 114pp; English
                                                                                                                                   Sequence 236 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New purified polynucleotide BL172 derivatives and encoded polypeptides - useful in the identification of markers, which are indicative of urinary tract diseases or conditions
                                                            No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 1999-045802/04.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Roberts-Rapp L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Billing-medel PA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (ABBO ) ABBOTT LAB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    05-JUN-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   05-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO9855656-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BL172; urinary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Urinary tract tissue library BL172 gene specific cDNA clone 2624118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAX01684;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAX01684 standard; DNA; 236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CysCysTyrAsp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LeuMetLeuCysGlnProHisLysArgCysGlyAspLysPheTyrAspProLeuGlnHis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTGATGCTGTGCCAGCCACACAAGAGATGTGGGGGACAAGTTCTACGACCCCCTGCAGCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGTTGCTATGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Granadosen,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    97US-0869579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 98WO-US11693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tract;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Russell JC,
                                                                                                                                49 A; 69 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cohen M,
  5.17e-57
64.00
100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      marker;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hodges
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ВÞ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Colpitts TL, Fries SC, Klass MR, Stroupe SD, Yu
                                                                                                                                62 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cancer; recombinant; human;
Length:
Matches:
Conservative:
                                                                                                                                   56
                                                                                                                                T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Friedman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Kratochvil JD;
  236
04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20
```

```
RESULT 13
AAS92056
ID AAS921
XX AAS921
XX AAS921
XX AAS921
XX Human
KW Human
KW food
XX Homo
X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-092-297-17 (1-117) x AAX01684 (1-236)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity:
Query Match:
The invention relates to isolated polynucleotide (I) and polypeptide (II) sequences. (I) is useful as hybridisation probes, polymerase chain reaction (PCR) primers, oligomers, and for chromosome and gene mapping, and in recombinant production of (II). The polynucleotides are also used in diagnostics as expressed sequence tags for identifying expressed genes. (I) is useful in gene therapy techniques to restore normal activity of (II) or to treat disease states involving (II). (II) is useful for generating antibodies against it, detecting or quantitating a polypeptide in tissue, as molecular weight markers and as a food supplement. (II) and its binding partners are useful in medical imaging of sites expressing (II). (I) and (II) are useful for treating disorders involving aberrant protein expression or biological activity. The polypeptide and polynucleotide sequences have applications in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New isolated polynucleotide and encoded polypeptides, useful in diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits and to assess biodiversity
                                                                                                                                                                                                                                                                                                                                                                                                      Claim 1; SEQ ID No 27860; 103pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                biodiversity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Drmanac RT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         31-MAR-2000; 2000US-0540217
23-AUG-2000; 2000US-0649167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           30-MAR-2001; 2001WO-US08631.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO200175067-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAS92056
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAS92056 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (HYSE-) HYSEQ INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA encoding novel human diagnostic protein #27860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human; chromosome mapping; gene mapping; gene therapy; forensic; food supplement; medical imaging; diagnostic; genetic disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             114 ArgSerValSer 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MetValLysLeuIleAsnGlnAsnCysAspSerAlaArgThrSerAspAspArgLeuCys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2001-639362/73.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGCAGTGTCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ABG27869
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Liu C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100:00%
54.70%
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cDNA; 1338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        forensic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60
```

diagnostics, forensics, gene mapping, identification of mutations responsible for genetic disorders or other traits to assess biodiversity

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          888888888888888
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-092-297-17 (1-117) x AAS92056 (1-1338)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             \BA49458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
                                                                                                                                                                                                                                               04-FEB-2000; 2000US-0180312.
26-MAY-2000; 2000US-0204456.
30-JUN-2000; 2000US-0632366.
21-SEP-2000; 2000US-0632368.
21-SEP-2000; 2000US-0236359.
04-OCT-2000; 2000GB-0024263.
                                The invention relates to a spatially-addressable set of single exon nucleic acid probes for measuring gene expression in a sample derived from human breast and BT 474 cells. The method involves contacting the probes with a collection of detectably labelled nucleic acids
                                                                                                                   New spatially-addressable set of single exon nucleic acid probes, useful for measuring gene expression in sample derived from humar breast, comprises number of single exon nucleic acid probes
                                                                                                                                                                           WPI;
                                                                                                     Claim
          derived from mRNA of human breast, and then measuring the label
bound to each probe of the microarray. The probes are useful fo
                                                                                                                                                                                                    Penn
                                                                                                                                                                                                                                                                                                                                                  30-JAN-2001; 2001WO-US00662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       and to produce other types of data and products dependent on D amino acid sequences. AAS64197 AAS94564 represent novel human diagnostic coding sequences of the invention. Note: The sequence data for this patent did not appear in the specification, but was obtained in electronic format directly at ftp.wipo.int/pub/published_pct_sequences.
                                                                                                                                                                                                                         (MOLE-)
                                                                                                                                                                                                                                                                                                                                                                         09-AUG-2001.
                                                                                                                                                                                                                                                                                                                                                                                                   WO200157271-A2
                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human; microarray; single exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human breast
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ABA49458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ABA49458 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 1338 BP; 311 A; 350 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       78
                                                                                                                                                                                                  SG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AsnCysThrPheArgValCysPheGlu 86
                                                                                                                                                                          2001-496933/54.
                                                                                                  4; SEQ
                                                                                                                                                                                                                        MOLECULAR DYNAMICS INC.
                                                                                                                                                                                                 Hanzel DK,
                                                                                                  ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cell single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                              NO 8153; 327pp +
                                                                                                                                                                                                                                                                                                                                                                                                                                                  SS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8.5
9.00
100.00%
100.00%
7.69%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA;
                                                                                                                                                                                                Chen W,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     exon
regions of genomic DNA predicted to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  nucleic acid probe #8153
                                                                                                                                                                                                Rank
                                                                                                                                                                                                                                                                                                                                                                                                                                                           probe; gene
                                                                                              sequence listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 348 G; 329 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels:
                                                                                                                                                                                                DR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          expression; breast;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1338
0
0
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         on DNA
                                                                                                                                  human
          for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        from WII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WIPO
```

```
RESULT 15
ABA67371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-092-297-17 (1-117) x ABA49458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred.
                                         The invention relates to a single exon nucleic acid measuring human gene expression in a sample derived
                                                                                                                                      WPI; 2001-483447/52.
                                                                                                                                                                                                                                                                  04-FEB-2000;
26-MAY-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    encode proteins. They are useful for gene discovery, and for determining predisposition and/or prognosing breast disease. Gene expression analysis is useful for assessing the toxicity of chemical agents on cells. The microarray of this invention presents a far greater diversity of probes for measuring gene expression, with far less bias than expressed sequence tag microarrays. The method is suitable for rapid production of functional information from genomic sequence. The present sequence is a single exon nucleic acid probe of the invention. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly
                                                                                                                                                                                   (MOLE-)
                                                                                                                                                                                                           04-OCT-2000;
                                                                                                                                                                                                                      21-SEP-2000;
27-SEP-2000;
                                                                                                                                                                                                                                            30-JUN-2000;
03-AUG-2000;
                                                                                                                                                                                                                                                                                                    30-JAN-2001; 2001WO-US00669
                                                                                                                                                                                                                                                                                                                                                   WO200157277-A2
                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                Human; foetal
                                                                                                                                                                                                                                                                                                                                                                                                                        Human
                                                                                                                                                                                                                                                                                                                                                                                                                                              01-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ABA67371;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ABA67371 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 252 BP; 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               from WIPO at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ..
..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  70 LeuAlaArgThrGlnThrCysGly 77
                                                                                                                                                              SG,
                                                                                                  genome-derived single exon nucleic zing gene expression in human fetal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGGCTAGAACCCAGACTTGTGGC 135
                                                                                                                                                                                                                                                                                                                                                                                                                       foetal
                                                                                                                                                                                  MOLECULAR DYNAMICS INC
                                                                              SEQ
                                                                                                                                                             Hanzel
                                                                                                                                                                                                        2000US-0632366.
2000US-0234687.
2000US-0236359.
2000US-0024263.
                                                                              ID NO
                                                                                                                                                                                                                                                      2000US-0207456.
2000US-0608408.
                                                                                                                                                                                                                                                                                                                                                                                                                     liver single
                                                                                                                                                                                                                                                                              2000US-0180312
                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                                                                                               liver;
                                                                                                                                                             DK,
                                                                          15676; 639pp + sequence listing; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18.6
8.00
100.00%
100.00%
6.84%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ?
                                                                                                                                                                                                                                                                                                                                                                                               gene
                                                                                                                                                            Chen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        53 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           252
                                                                                                                                                                                                                                                                                                                                                                                            expression;
                                                                                                                                                                                                                                                                                                                                                                                                                  exon nucleic acid probe #15676
                                                                                                                                                           Ę
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       54 G;
                                                                                                                                                           Rank DR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (1-252)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ength
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       63 T; 0 other;
                                                                                                                                                                                                                                                                                                                                                                                              single
                                                                                                   acid probes useful for liver -
                                                                                                                                                                                                                                                                                                                                                                                              exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0000825
                                                                                                                                                                                                                                                                                                                                                                                           nucleic acid probe;
                                      probe for from human foetal
```

measuring human gene expression in a sample derived from human foetal liver. The single exon nucleic acid probes may be used for predicting, measuring and displaying gene expression in samples derived from human

liver.

The present

sequence is

single exon nucleic

```
CC Note: The sequence data for this patent did not form part of the CC printed specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences.

XX Sq Sequence 252 BP; 82 A; 53 C; 54 G; 63 T; 0 other;

Alignment Scores:
Pred. No.:
18.6
Score:
Percent Similarity: 100.00% Matches:
Percent Similarity: 100.00% Mismatches: 0
Ouery Match: 6.84% Indels: 0
Ouery Match: 22 Gaps: 0
```

Ş

US-09-092-297-17 (1-117) x ABA67371 (1-252)

70 LeuAlaArgThrGlnThrCysGly 77

Search completed: November 3, 2002, 05:05:08 Job time: 215 secs

```
Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                **MODEL-frame+_p2n.model -DEV=x1h

**MODEL-frame+_p2n.model -DEV=x1h

**OP-Cgn2_1/USPTO_spool/US09092297/runat_29102002_094017_22411/app_query.fasta_1.263

**DB-ISSUEd_Patents_NA -OEMT-fastap -SUFFIX=011p2n.rn1 -MINMATCH=0.1 -LOOPCL=0

**LOOPEXT=0 -UNITS-bits -START=1 -END=-1 -MATTIX=011p0 -TRANS=human40.cd1

**LIST=45 -DOCALIGN=200 -THR_SCORE=quality -THR_MINI -ALIGN=15 -MODE=LOCAL

**OUTEMT-pto -NORM-ext -HEAPSIZE-500 -MINIEN=0 -MAXLEN=200000000

**USER=US09092297_@CGN_1_1_13_@runat_29102002_094017_22411 -NCPU=6 -ICPU=3

**NO_XLPXY -NO_MMAP -LARGEQUERY -NEG_SCORES=0 -WAIT -LONGLOG -DEV_TIMEOUT=120

**WARRI_TIMEOUT=00 -THREADS=1 -NOAPOP=60 -KGAPEXT=60 -FGAPEXT=7

**MARRI_TIMEOUT=00 -THREADS=1 -NOAPOP=60 -KGAPEXT=60 -FGAPEXT=7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Total number of hits satisfying chosen parameters:
                                                                                                                                                                00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Command line parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Post-processing: Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Word size:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               seq length: seq length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           nucleic search, using frame_plus_p2n model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Issued_Patents_NA:*

1: /cgn2_6/ptodata/)

2: /cgn2_6/ptodata/)

3: /cgn2_6/ptodata/)

4: /cgn2_6/ptodata/)

5: /cgn2_6/ptodata/)

6: /cgn2_6/ptodata/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Xgapop 60.0 , Ygapop 6.0 , Ygap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OLIGO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 PLQPPRAMAPRGCIVAVFAI.....INQNCDSARTSDDRLCRSVS 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                us-09-092-297-17
117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              383533 seqs,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         November 3,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GenCore version 5.1.3 Copyright (c) 1993 - 2002 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                           .
00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /cgn2_6/ptodata/1/ina/5A_COMB.seq: *
/cgn2_6/ptodata/1/ina/5B_COMB.seq: *
/cgn2_6/ptodata/1/ina/6A_COMB.seq: *
/cgn2_6/ptodata/1/ina/6B_COMB.seq: *
/cgn2_6/ptodata/1/ina/PCTUS_COMB.seq: *
/cgn2_6/ptodata/1/ina/Packfiles1.seq: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DΒ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2002, 03:21:26; Search time 46 Seconds (without alignments) 624.763 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          122816752 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Xgapext 60.0
Ygapext 60.0
Fgapext 7.0
Delext 7.0
                                                                                                                                                    US-08-548-159-6
US-08-716-873-3
US-08-716-873-13
US-08-716-873-14
                                                                                                                   US-09-368-431-3
                                                                                                                                                                                                                                                                                                                    PCT-US95-02576-6
                                                                                                                                                                                                                                                                                                                                                             US-08-998-416-325
US-08-205-697A-6
US-08-702-525-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SUMMARIES
                                                                                                                                                                                     Sequence
Sequence
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Description
                                                                                                                                                                                                                                                                                                                                                     Sequence
Sequence
                                                                          Sequence
                                                                                                                   Sequence
                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
equence
                                     sequence
                                                                                                                                           6, Appli
6, Appli
6, Appli
6, Appli
3, Appli
13, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                       325, App
                                                                                                      Appl
```

		-																		•											.,
45	4 4 4 4	2	41	40	9	38	37	36	ω G	34	w	32	<u> </u>	30	29	28	27	26	25	24	23	22	21	20	19	8	17	16	15	14	13
σ,	თ თ	n 01	ი	o	o.	0	. თ	0	o	თ	σ	6	. 6	0	6	. 7	7	7	7	7 .	7	7	. 7	7	7	7	7	7	7	7	7
5.1	J (J	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	٠	5.1		٠		•					• •							6.0	
43	4 4 W	4.	43	41	41	41	41	41	41	40	37	37	37	32	20	220	20	220	666	155	36	2	2	26	26	2	H	7	2	4080	8
21		دسو	۳	w	N	μ.	۲	Н	_	4	4	2	۳	N	4	4	4	N	4	u	ω	μ	4	w	w	μ	4	4	N	<b>-</b>	4
S-08-469-609A-3	12-110-306	S-07-714-131C-3	S-07-931-473B-30	S-09-143-190-28	S-08-469-609A-2	S-08-409-442A-28	S-08-412-110-28	S-07-714-131C-2	S-07-931-473B-28	S-09-275-850-15	S-08-985-659-1	S-08-704-706A-	S-08-468-700-1	S-08-859-389B-6	S-09-488-856A-6	-09-230-371A-	-08-757-669A-2	-08-770-379-2	-09-564-805-28	T-US93-06251-	-08-976-255-5	-08-570-311-	-09-490-931-	-08-822-324-5	-08-336-308A	-08-570-311-2	-09-368-431-	-08-716-873-	-08-353-485-	08-570-311	-09-541-782-
าโรย edr	quence 306	equence 306	equence 306	equence 280	equence 280	equence 28(	equence 280	equence 280	equence 280	equence 15	equence 17	equence 17	equence 17	equence 6,	equence 61	equence 20	equence 20	equence 20	equence 28	equence 23	equence 5,	equence 28	equence 9.	equence 5,	equence 9,	equence 25	equence 1,	equence 1,	equence 7,	equence 7,	equence 1,

## ALIGNMENTS

0 0 0 0 0 0 0 0 0 0

US-08-998-416-325 RESULT 1 Sequence tent No. PRIOR APPLICATION DATA:
APPLICATION NUMBER: CH 0016/97
FILING DATE: 31-DEC-1996
ATTORNEY/AGENT INFORMATION: COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA: COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy APPLICANT:
APPLICANT: CORRESPONDENCE ADDRESS APPLICANT: APPLICANT: Rebischung, Corinne TITLE OF INVENTION: GENOMIC DNA SEQUENCES TITLE OF INVENTION: AND USES THEREOF APPLICANT: NUMBER OF SEQUENCES: APPLICANT: APPLICATION NUMBER: US/08/998,416 FILING DATE: 24-DEC-1997 CLASSIFICATION: 435 COUNTRY: STREET: ADDRESSEE: INFORMATION: Research Triangle Park No. 6239264th Carolina 27709 ĕ. 3054 Cornwallis Road Pohlmann, Rainer Steiner, Sabine Mohr, Christine Application US/08998416 USA Wendland, Jurgen Knechtle, Philipp Philippsen, No. 6239264artis Corporation J. Timothy Floppy disk Peter Version ç ASHBYA GOSSYPII

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 2
US-08-205-697A-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-092-297-17 (1-117) x US-08-998-416-325 (1-846)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Percent Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            JS-08-998-416-325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 6, Application US/08205697A Patent No. 6218510
                                                            TELEFAX: (617)227-5941
NFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
LENGTH: 1753 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                        COMPUTER: IBM PC compatible operating SYSTEM: PC-DOS/MS-DOS SOFTWARE: ASCII Text CURRENT APPLICATION DATA: APPLICATION NUMBER: US/08/205,697A FILING DATE: 02-Mar-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MOLECULE TYPE: DNA (genomic)
ORIGINAL SOURCE:
ORGANISM: PAG1060UP
MOLECULE TYPE:
                                                                                                                        NAME: MANDERGOURAS, AMY E.
REGISTRATION NUMBER: 36,207
REFERENCE/DOCKET NUMBER: BW
FELECOMMUNICATION INFORMATION:
TELEPHONE: (617)227-7400
                                                                                                                                                                                                      ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                    MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELECOMMUNICATION INFORMATION: TELEPHONE: 919-541-8587
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                508 GACGCGGTCGTGCCACTGGCC 528
                                         TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                   COUNTRY: USA
ZIP: 02109-1875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   65 AspAlaValValProLeuAla 71
               STRANDEDNESS:
TOPOLOGY: lir
                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ropology:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REGISTRATION NUMBER: 38 REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   E OF INVENTION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                        Boston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                      Massachusetts
                                                                                                                                                                                                                                                                                                                                                                                                                   60 State Street, suite 510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             919-541-8689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Freeman, Gordo
Nadler, Lee M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sharpe, Arlene H.
Borriello, Francescopaulo
               linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                   LAHIVE & COCKFIELD
                            double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.00%
100.00%
5.98%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       126
7.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    and Uses Therefor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ĕ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6218510el Forms of T Cell Costimulatory Molecules
                                                                                                                                                             BWI-120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PF/5-30306/A/CGC1976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0000
```

```
US-09-092-297-17 (1-117) x US-08-702-525-6 (1-1753)
                                                                                       Query Match:
                                                                                                  Percent Similarity:
Best Local Similarity:
                                                                                                                                       Score:
                                                                                                                                                 Alignment Scores: Pred. No.:
                                                                                                                                                                                                US-08-702-525-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-092-297-17 (1-117) x US-08-205-697A-6 (1-1753)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alignment Scores
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 08-702-525-6
                                                                                                                                                                                                                                                                                                        TELEFAX: (617)2
NFORMATION FOR SEQ
                                                                                                                                                                                                             TOPOLOGY: 1
                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
LENGTH: 1753 base pair
                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US 08/205,697 FILING DATE: 02-Mar-1994 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                 ELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              274 TCCCGACTCCTCTGCTCCCAC 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: ASCII Text
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               24 SerArgLeuLeuCysSerHis 30
                                                                                                                                                                                                                                          STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                 REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                 REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                              NAME: Mandragouras, Amy E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                     ELEPHONE:
SerArgLeuLeuCysSerHis 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    02109-1875
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Boston
                                                                                                                                                                                                                                                        nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Application US/08702525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Massachusetts
                                                                                                                                                                                                                                                                       1753 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3: LAHIVE & COCKFIELD
28 State Street
                                                                                                                                                                                                                                                                                                                      (617)227-5941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Borriello, Francescopaolo
Freeman, Gordon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sharpe,
                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                 (617)227-7400
                                                                                      100.00%
100.00%
5.98%
                                                                                                                                                                                                                                                                                                          ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7.00
100.00%
100.00%
5.98%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          No. 6294660el Forms of T Cell Costimulatory Molecules and Uses Therefor 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sharpe
                                                                                                                                    00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US/08/702,525
                                                                                                                                                                                                                                                                                                      6.
                                                                                                                                                                                                                                                                                                                                                                   BWI-120CPUS
                                                                                      Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                                                                  Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1753
7
```

274 TCCCGACTCCTCTGCTCCCAC 294

```
US-09-092-297-17 (1-117) x PCT-US95-02576-6 (1-1753)
                                                                                                                                                                                                                                                                                                                                                                                                                   Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PCT-US95-02576-6
                                                                                                                                                                                                 Sequence 6, Application US/08548159 Patent No. 5989551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 6, Application PC/TUS9502576 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY: USA COUNTRY: USA COUNTRY: USA CIP; 02109-1875
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
MEDIUM TYPE: FLOPPY DISK
MEDIUM TYPE: PLOPPY DISK
MEDIUM TYPE: PLOPPY DISK
MEDIUM TYPE: PLOPPY DISK
MEDIUM TYPE: PC-DOS/MS-DOS
                                                                                                                                                                                                                                   ·08-548-159-6/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEFAX: (617)227-594 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                ENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME: Mandragouras, Amy E.
REGISTRATION NUMBER: 36,207
REFERENCE/DOCKET NUMBER: BW
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617)227-7400
                  CORRESPONDENCE ADDRESS:
ADDRESSEE: Saliwanch
                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE CHARACTERISTICS:
                                                    TITLE OF INVENTION: Materials and Methods for Detection and TITLE OF INVENTION: Treatment of Insulin Dependent Diabetes NUMBER OF SEQUENCES: 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US 08/205,697 FILING DATE: 02-Mar-1994 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES: 6
                                                                                                               PPLICANT:
                                                                                                                            PPLICANT:
                                                                                                                                                                                                                                                                                         274 TCCCGACTCCTCTCCCCAC 294
                                                                                                                                                                                                                                                                                                       24 SerArgLeuLeuCysSerHis 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1753 base pairs
: Saliwanchik & Saliwanchik
2421 N.W. 41st Street, Suite A-1
                                                                                                                                           Maclaren, No. 59895511 K. No. 5989551kins, Abner L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60 State Street, suite 510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (617)227-5941
                                                                                                                     Lan,
                                                                                                          Li, Qing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LAHIVE & COCKFIELD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     acid
                                                                                                                            Michael S.
                                                                                                                                                                                                                                                                                                                                                                                                                100.00%
100.00%
5.98%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Novel Forms of T Cell Costimulatory Molecules and Uses Therefor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PCT/US95/02576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                 Indels:
                                                                                                                                                                                                                                                                                                                                                                                                 0000
```

```
RESULT 6
US-08-716-873-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-092-297-17 (1-117) x US-08-548-159-6 (1-2351)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match:
DB:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JS-08-548-159-6
                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 3, Application US/08716873
Patent No. 6194166
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEFAX: 904-372-5800 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                 APPLICATION NUMBER: US/08/716,873
FILING DATE: September 20, 1996
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                        COMPUTER READABLE FORM: MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOLECULE TYPE:
ORIGINAL SOURCE:
                                                                                                                                     CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELECOMMUNICATION INFORMATION:
TELEPHONE: 904-375-8100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
                 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
ADDRESSEE: Wenderoth,
                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Takashi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      111 ArgLeuCysArgSerValSer 117
                                                                                                                                                     COMPUTER: IBM Compatible OPERATING SYSTEM: MS-DOS SOFTWARE: Wordperfect 5.1
                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                          COUNTRY: UZIP: 20005
                                                                                                                                                                                                                                                                                          CITY: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     80 AGACTCTGCAGGAGTGTGTCA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY: 11r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Bencen, Gerard H.
REGISTRATION NUMBER: 35,746
REFERENCE/DOCKET NUMBER: UF
                                                                                                                                                                                                                                                                                                               STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INDIVIDUAL ISOLATE: Mouse IA-2 Beta cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               32606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            nucleic acid
pedness: single
                                                                                                                                                                                                                                                                            D.C.
Warren M. Cheek, Jr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 E
                                                                                                                                                                                                                                                                                                          E: Wenderoth, Lind & Ponack
805 Fifteenth Street, N.W., #700
                                                                                                                                                                                                                                                          U.S.A.
                                                                                                                                                                                                                                                                                                                                                               Takashi OKADO et al.
VENTION: GENE REGULATING AUREOBASIDIN SENSITIVITY
EQUENCES: 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      904-372-5800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 linear
                                                                                                                                                                                                        Diskette,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7.00
100.00%
100.00%
5.98%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US/08/548,159
                                                                                                                                                                                                        3.5 inch, 1.44 mb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      UF154.C1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative: Mismatches:
```

```
RESULT 7
US-08-716-873-13/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-092-297-17 (1-117) x US-08-716-873-3 (1-2856)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JS-08-716-873-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                        NFORMATION FOR SEQ ID NO: 13:
                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US
FILING DATE: September
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     equence 13, Application US/08716873 tent No. 6194166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ENERAL INFORMATION:
                                                    SEQUENCE CHARACTERISTICS:
LENGTH: 2856 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REGISTRATION NUMBER: 33,367
REFERENCE/DOCKET NUMBER:
FELECOMMUNICATION INFORMATION:
TELEPHONE: 202-371-8850
                                                                                                                                                                                                                                                                                                                                   SOFTWARE: Wordperfect CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       No .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REGISTRATION NUMBER: 33,367
REFERENCE/DOCKET NUMBER:
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-371-8850
                MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                           TTORNEY/AGENT INFORMATION:
NAME: Warren M. Cheek, J
                                                                                                                                                                                                                                                                                                                                      COMPUTER: IBM COMPUTER: OPERATING SYSTEM: MS-DOS
COPTWARE: Wordperfect 5.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STREET: 805 Fitte
CITY: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: nucleic acid
STRANDEDNESS: double
                              TOPOLOGY:
                                         STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             STATE: D.C.
                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 2856 base pairs
-SENSE:
                                                                                                                                                                                                                                                                                                                                                                                                                                20005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3: Wenderoth, Lind & Ponack
805 Fifteenth Street, N.W., #700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Takashi OKADO et al.
WENTION: GENE REGULATING AUREOBASIDIN SENSITIVITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                U.S.A.
        linear
E: Genomic DNA
Yes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                      September 20, 1996
N: 435
                                         double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         396
7.00
100.00%
100.00%
5.98%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>س</u>
                                                                                                                                                                                                                                                                                                                                                                                                  3.5 inch,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches:
                                                                                                                                                                                                                                                                                                                                                                                                   1.44
```

```
US-09-092-297-17 (1-117) x US-08-716-873-14 (1-2856)
                                               Query Match:
                                                            Percent Similarity:
Best Local Similarity:
                                                                                                                                                        US-08-716-873-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                              Score:
                                                                                                                          Alignment Scores:
                                                                                                             Pred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-092-297-17 (1-117) x US-08-716-873-13 (1-2856)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 14, Application US/08716873 Patent No. 6194166
                                                                                                                                                                                                                                               INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS: LENGTH: 2856 bases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        08-716-873-14/c
                                                                                                         .
No . :
                                                                                                                                                                     MOLECULE TYPE:
ANTI-SENSE: Y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: Wordperfect CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM: MEDIUM TYPE: Diskette,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                        ATTORNEY AGENT INFORMATION:
NAME: Warren M. Cheek, Jr.
REGISTRATION. NUMBER: 33,367
REFERENCE/DOCKET NUMBER:
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-371-8850
                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Takashi OKADO et al.
TITLE OF INVENTION: GENE REGULATING AUREOBASIDIN SENSITIVITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      23 IleSerArgLeuLeuCysSer 29
                                                                                                                                                                                                    TOPOLOGY:
                                                                                                                                                                                                                STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: FILING DATE: Septe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CITY: Washington STATE: D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                    PPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20005
                                                                                                                                                                                                                                nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  E: Wenderoth, Lind & Ponack 805 Fifteenth Street, N.W., #700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Wordperfect 5.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     U.S.A.
                                                                                                                                                                                                linear
                                                                                                                                                                       Yes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IBM Compatib
                                                                                                                                                                                     mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              September 20, 1996
                                                                                                                                                                                                                  single
                                              100.00%
100.00%
5.98%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            396
7.00
100.00%
100.00%
5.98%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MS-DOS
                                                                                            . 00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US/08/716,873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ω
.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        inch, 1.44
                                              Conservative: Mismatches: Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length:
Matches:
Conservative:
Mismatches:
Indels:
                                                                                          Length:
Matches:
                               Gaps:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          킖
```

1633 ATCAGTCGCCTGTTGTGTTCG 1613

23 IleSerArgLeuLeuCysSer 29

```
US-09-092-297-17 (1-117) x US-09-368-431-3 (1-2856)
                                                                                                                                                                                                                                                                             Best Local Similarity:
Query Match:
                                                                                                                                   RESULT 10
US-09-368-431-13/c
                                                                                                         3-09-300
Sequence 13, App.
                                                                                                                                                                                                                                                                                                       ercent Similarity:
                                                                                                                                                                                                                                                                                                                                               Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Patent No. 629465
                                                                                               ENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ENERAL INFORMATION:
                                                      TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE/DOCKET NUMBER: TELECOMMUNICATION INFORMATION: TELEPHONE: 202-721-8200
                           ORRESPONDENCE
                                                                                PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: Wordperfect 5.1
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
                                         UMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                 STRANDEDNESS:
            DDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LASSIFICATION:
                                                                                                                                                                                            IleSerArgLeuLeuCysSer 29.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LING DATE: September 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Washington
                                                                                                                                                                                                                                                                                                                                                                                                                 nucleic acid
EDNESS: double
                                                                                                                                                                                                                                                                                                                                                                                         TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Warren
                                                                                                                Application US/09368431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Application US/09368431
2033 K Street, N.W., #800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         E: WENDEROTH, LIND & PONACK, L.L.P. 2033 K Street, N.W., #800
                                                           Takashi OKADO et al.
VENTION: GENE REGULATING AUREOBASIDIN SENSITIVITY
                                                                                                                                                                                                                                                                                                                                                                                                                                           2856 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      202-721-8250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Takashi OKADO et al.
JENTION: GENE REGULATING AUREOBASIDIN SENSITIVITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IBM Compatibl
                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 September 20, 1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        August 5, 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Diskette,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      M. Cheek,
                                                                                                                                                                                                                                                                                                              396
7.00
                                                                                                                                                                                                                                                                           100.00%
100.00%
5.98%
                                                      (AS AMENDED)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (AS AMENDED)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                08/716,873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .US/09/368,431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          33,367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Jr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3.5 inch, 1.44 mb
                                                                                                                                                                                                                                                                                                                  Length:
Matches:
                                                                                                                                                                                                                                                                          Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                     Conservative:
```

```
US-09-092-297-17 (1-117) x US-09-368-431-13 (1-2856)
                                                                                                                                                                                                                                                                                                                                     RESULT 11
US-09-368-431-14/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-368-431-13
                                                                                                                                                                                                                                                                                                     Sequence 14, Application US/09368431 Patent No. 6294651
               COMPUTER READABLE FORM:

MEDIUM TYPE: Diskette, 3.5

COMPUTER: IBM Compatible
OPERATING SYSTEM: MS-DOS
SOFTWARE: Wordderfect 5.1

CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/3
                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                              ANTI-SENSE
                                                                                                                                                                                                                CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                            PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ŏ
::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELECOMMUNICATION INFORMATION: TELEPHONE: 202-721-8200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: September 20, 1996 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: Wordperfect 5.1
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
                                                                                                                                                                                                                               UMBER OF SEQUENCES:
                                                                                                                                                                                                                                             ITLE OF INVENTION:
                                                                                                                                        COUNTRY:
                                                                                                                                                                                               ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REGISTRATION NUMBER: 33
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STATE: D.C.
COUNTRY: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ENGTH:
                                                                                                                                                                Washington
                                                                                                                          20006
                                                                                                                                   D.C.
Y: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Warren M. Cheek,
                                                                                                                                                                              E: WENDEROTH, LIND & PONACK, L.L.P. 2033 K Street, N.W., #800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2856 base pairs
                                                                                                                                                                                                                                                   Takashi OKADO et al.
VENTION: GENE REGULATING AUREOBASIDIN SENSITIVITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    202-721-8250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Yes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IBM Compatible
UMBER: US/09/368,431
August 5, 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Diskette,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Genomic DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      August 5, 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.00%
100.00%
5.98%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MS-DOS
                                                                                                                                                                                                                                           (AS AMENDED)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          08/716,873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US/09/368,431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            33,367
                                                                                         3.5 inch, 1.44 mb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ĵ٢.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3.5 inch, 1.44 mb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative: Mismatches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels:
```

```
Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-092-297-17 (1-117) x US-09-368-431-14 (1-2856)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JS-09-368-431-14
                                                             ATTORNEY/AGENT INFORMATION:
NAME: Campbell, Cathryn A.
REGISTRATION NUMBER: 31,815
REFERENCE/DOCKET NUMBER: P-LJ
TELECOMMUNICATION INFORMATION:
TELEPHONE: (619) 535-9001
TELEPAX: (619) 535-8849
INFORMATION FOR SEQ ID NO: 10:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 10,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .09-041-886-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            quence 10, Application US/09041886 tent No. 6235872 SERVEL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Мо
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE/DOCKET NUMBER: TELECOMMUNICATION INFORMATION: TELEPHONE: 202-721-8200
                                              SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                       SOFTWARE: Patentin Rel
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ANTI-SENSE:
                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                   TUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TILE OF INVENTION:
                                                                                                                                                                                         CLASSIFICATION:
                                                                                                                                                                                                                                                                    COMPUTER: IBM PC OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                   COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23 IleserArgLeuLeuCysser 29
   STRANDEDNESS:
                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                    CITY: San Diego
                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 2856 bases
TYPE: nucleic acid
STRANDEDNESS: singl
                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                  ENGTH:
nucleic acid
EDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Warren M. Cheek,
                                                                                                                                                                                                                                                                                                                                                                     California
                                                                                                                                                                                                                                                                                                                                                                                                E: Campbell & Flores LLP
4370 La Jolla Village Drive, Suite 700
                             3715 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 202-721-8250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rabizadeh,
                                                                                                                                                                                                                                                                                                                                                     United States
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bredesen, Dale E
                                                                                                                                                                                                                                                                     IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         September 20, 1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.00%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                396
7.00
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Proapoptotic Peptides, Dependence Polypeptides and Methods of Use
                                                                                                                                                                                                                                                        Release #1.0, Version #1.25
                                                                                                                                                                                                                       US/09/041,886
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sharroz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            08/716,873
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           33,367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Jr
                                                                                                                            P-LJ 2626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ength:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2856
```

ş

```
Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                          US-09-092-297-17 (1-117) x US-09-541-782-1 (1-4014)
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Percent Similarity:
Best Local Similarity:
                                                                                                                                                                                                                                                US-08-570-311-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-541-782-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-092-297-17 (1-117) x US-09-041-886-10 (1-3715)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-041-886-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-541-782-1/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No.:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQ ID NOS:
SOFTWARE: FastSEQ for
SEQ ID NO 1
                                                                                                                                                                                                                Sequence 7, Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 1, Application US/09541782 Patent No. 6284480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/09/541,782
CURRENT FILING DATE: 2000-04-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILE REFERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Sakowicz, Roman
APPLICANT: Beraud, Christophe
ITLE OF INVENTION: Antifungal Assay
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM: A.nidulans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LENGTH: 4014
                                           TITLE OF INVENTION: Cloned Porphyromonas gingivalis Genes
TITLE OF INVENTION: and Probes for the Detection of Periodontal Disease
NUMBER OF SEQUENCES: 29
                                 CORRESPONDENCE
                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3620 CTGTGCCAGCCACACAAACGT 3640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
                                                                                                   APPLICANT:
                                                                                                                APPLICANT:
                                                                                                                                                APPLICANT:
                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                            66 AlaValValProLeuAlaArg 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    43 LeuCysGlnProHisLysArg
                                                                                                                                                                                                                                                                                             24 GCTGTTGTTCCGTTGGCCAGA 4
                  ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY:
                                                                                                                                                                                                                               Application US/08570311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nislow, Corey
E: Ted W. Whitlock
2421 N.W. 41st Street, Suite A-1
                                                                                              Lantz, Marilyn
Patti, Joseph
                                                                                                                                 Han, Naiming
                                                                                                                                                          Tumwasorn, Somying
                                                                                                                                                                              Progulske-Fox, Ann
                                                                                                                                                Lepine, Guylaine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CDS
532..3286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                         546
7.00
100.00%
100.00%
5.98%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.00%
100.00%
5.98%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         508
7.00
                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches:
Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative: Mismatches:
```

STREET:

Gainesville

```
US-09-092-297-17 (1-117) x US-08-570-311-7 (1-4080)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; NAME/KEY:
; LOCATION:
US-08-570-311-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Alignment Scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 7, Application US/08353485 Patent No. 5830710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          08-353-485-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEFAX: (904) 372-580
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    No . .
                                                                                                                 CORRESPONDENCE ADDRESS
                                                                                                                                       APPLICANT: Lantz, Marilyn
APPLICANT: Patti, Joseph
TITLE OF INVENTION: Cloned Porphyromonas gingivalis Genes
TITLE OF INVENTION: and Probes for the Detection of Periodontal Disease
NUMBER OF SEQUENCES: 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE/DOCKET NUMBER: UF TELECOMMUNICATION INFORMATION: TELEPHONE: (904) 375-8100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/353,485
FILING DATE: 09-DEC-1994
                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                            PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOLECULE TYPE: CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US 0:
FILING DATE: 25-JAN-1991
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     25 ArgLeuLeuCysSerH1sGly 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: Patentin Palantin Palan
                                                                       ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRANDEDNESS: si
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME: Whitlock, Ted W.
REGISTRATION NUMBER: 36,965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US 07/241,640 FILING DATE: 08-SEP-1988 TORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CGGCTACTATGCAGTCATGGT 3304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION DATA:
SEE: Ted W. Whitlock
: 2421 N.W. 41st Street, Suite A-1
Gainesville
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         32606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4080 base pairs
                                                                                                                                                                                                                                                                                                                                                               Tumwasorn, Somyii
Lepine, Guylaine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CDS
87..3347
                                                                                                                                                                                                                                                                                                                                                                                                                                          Progulske-Fox, Ann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 single
                                                                                                                                                                                                                                                                                                                                    Naiming
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   372-5800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.00%
100.00%
5.98%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US 07/647,119
                                                                                                                                                                                                                                                                                                                                                                                                 Somying
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US/08/570,311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             UF15.C3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length:
Matches:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches:
Indels:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4080
7
```

```
Search completed: November 3, 2002, 05:06:19 Job time: 55 secs
                                                       밁
                                                                                 δ
                                                                                                      US-09-092-297-17 (1-117) x US-08-353-485-7 (1-4080)
                                                                                                                                                 Percent Similarity:
Best Local Similarity:
Query Match:
                                                                                                                                                                                              Score:
                                                                                                                                                                                                        Alignment Scores: Pred. No.:
                                                                                                                                                                                                                                                ; NAME/KEY:
; LOCATION:
US-08-353-485-7
                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: (904) 372-5800
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                   MOLECULE TYPE: FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                              TELECOMMUNICATION INFORMATION: TELEPHONE: (904) 375-8100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: PatentIn Rel
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/241,640
FILING DATE: 08-SEP-1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME: Whitlock, Ted W. REGISTRATION NUMBER: 36 REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM PC
OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                    TOPOLOGY:
                                                                                                                                                                                                                                                                                                                           STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                        LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US 07/647,119
FILING DATE: 25-JAN-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US/0 FILING DATE: 09-DEC-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COUNTRY: U. ZIP: 32606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FL
                                                                                                                                                                                                                                                                                                                                           nucleic acid
                                                                                                                                                                                                                                                                                                                                                         4080 base pairs
                                                                                                                                                                                                                                                           87..3347
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                      CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Floppy disk
                                                                                                                                                 554
7.00
100.00%
100.00%
5.98%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US/08/353,485
                                                                                                                                                                                                                                                                                                                                                                                                                                                      36,965
                                                                                                                                                                                                                                                                                                                                                                                                                                         UF15.C2
                                                                                                                                               Mismatches:
Indels:
                                                                                                                                                                          Length:
Matches:
Conservative:
                                                                                                                                    Gaps:
                                                                                                                                                                                          4080
7
                                                                                                                                    0000
```